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ZOOLOGICAL

RECREATIONS.

BY

W. J. BRODERIP, ESQ., F.R.S.

&c. &c.

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"He prayeth best, who loveth best
All things both great and small;
For the dear God who loveth us,
He made and loveth all."

COLERIDGE.

LONDON:
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TO

RICHARD OWEN, M.D.

F.R.S. &c. &c.

HUNTERIAN PROFESSOR IN THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

My dear Owen,

In dedicating to you this little book, which would never have appeared in its present form without your suggestion and encouragement, I have only to hope that it will not be deemed entirely unworthy of association with your name.

I am,

My dear Owen,

Your sincere friend,

W. J. BRODERIP.

LONDON, MAY, 1847.

PREFACE.

THE Papers here collected, were commenced by the particular desire of one whose name cannot be written without a renewal of the regret, felt so deeply, by so many, for his untimely loss. The brilliancy of Theodore Hook's wit, vivid but innocuous as summer lightning, was only equalled by the goodness of his heart, and when he sank,

"Like a bright exhalation in the evening,"

he left a dark void, which those who had the happiness of enjoying his charming society, can never hope to see brightened again. For his sparkling conversation flowed continually, and without effort, like an exuberant Artesian well. There was no straining for effect: all was easy—springing from the gaiety of a soul warmed by the presence of those whom he loved.

These pages appeared in the New Monthly Magazine under his editorship. When the inimitable Thomas Hood—another irreparable loss—succeeded the lamented Theodore, the "Recreations" were continued at his request; and they were concluded, when that periodical passed into the able hands of William Harrison Ainsworth.

The "Recreations" have had the good fortune to receive some marks of public approbation; but the author, who sketched them as a relief from more severe studies and duties, would never have thought of reprinting them, had not the great Comparative Anatomist named in the dedication, and other scientific friends, urged their re-publication, under the impression that when brought together, they might form a hand-book which might cherish, or even awaken, a love for Natural History.

LONDON, MAY, 1847.

ZOOLOGICAL RECREATIONS.

SINGING BIRDS.

"Anna-Marie, love, up is the sun,
Anna-Marie, love, morn is begun,
Mists are dispersing, love, birds singing free,
Up in the morning, love, Anna-Marie."

IVANHOE.

THE melody of birds finds its way to the heart of every one; but the cause that prompts the outpourings that make copse, rock, and river, ring again on a fine spring morning is more a matter of doubt with ornithologists than the uninitiated in zoological mysteries might suppose. Much has been written on this subject, but upon a consideration of the different opinions, aided by our own observations, we are inclined to think that love and rivalry are the two great stimulants, though we do not mean to deny that a bird may sing from mere gaiety of heart arising from finding itself in the haunts dear to it, and in the midst of plenty of the food it likes; to give vent, in short, to the buoyancy of spirit arising from general pleasurable sensations.

In this country the season of reproduction is undoubtedly that wherein—

"The isle is full of pleasant noises,
Sounds, and sweet airs that give delight."

And about ten weeks have been mentioned as the period during which most of our wild birds are in song. That there are exceptions to this rule there is no doubt. We have heard a wild thrush, one of the sweetest singers of his tribe, sing far into September, but we watched narrowly and never could find that he had a mate. Then, again, we have the autumnal and even the winter notes of the robin long after the breeding season; and caged birds, if well fed and kept, will sing the greatest part of the year.

Let us endeavour, before we proceed further, to give the reader some idea of the natural musical instrument with which the loud and complicated passages of song-birds are executed. The *larynx* is formed much after the fashion of some artificial wind-instruments, and consists of two parts; of these the first contains the proper *rima glottidis*, at the upper end, while the bronchial, or lower *larynx*, is furnished with another *rima glottidis* with tense membranes. The lower apparatus may be compared to the reed in a clarionet or hautboy, and the upper to the ventage or hole of the instrument that utters the note. Besides all this, it has been truly asserted that there is no part of a bird's structure impervious to air; and, as M. Jæquemin observes, it is the volume of air which birds can introduce into their bodies, and the force with which they can expel it, that solve the problem how so small a creature as a singing bird can be capable of sending forth notes so loud and of warbling so long and so prodigally without apparent fatigue. The muscles, whose province it is to regulate this wonderful wind-instrument, are proportionably strong and highly developed in the sex which is more peculiarly gifted with musical power. Thus John Hunter, on dissecting a cock-nightingale, a cock and hen blackbird, a cock linnet, and a cock and hen chaffinch, found the muscles of the *larynx* to be stronger in the nightingale than in any other bird of the same size; and in all the instances where he dissected both cock and hen, he remarked that the same muscles were stronger in the cock. The rivalry with which some of these feathered songsters will sing against each other in captivity is well known to bird-fanciers, and Bechstein observes, speaking of the Thuringian Canary birds, that there are some males which, especially in the pairing season, sing with so much strength and ardour, that they burst the delicate vessels of the lungs and die suddenly.

The Hon. Daines Barrington, who paid much attention to this subject, remarks that some passages of the song in a few kinds of birds correspond with the intervals of our musical scale; but that much the greater part of such a song is not capable of musical notations. He attributes this to the following causes:—First, because the rapidity is often so great, and it is also so uncertain where they may stop, that it is impossible to reduce the passages to form a musical bar in any time whatsoever;—secondly, on account of the pitch of most birds being considerably higher than the most shrill notes of instruments of the greatest compass;—and lastly, because the intervals used by birds are commonly so minute that we cannot judge at all of them from the more gross intervals into which our musical octave is divided.

But though, as the same author observes, we cannot attain the

more delicate and imperceptible intervals in the song of birds, yet many of them are capable of whistling tunes with our more gross intervals, as in the case of piping bullfinches and canary-birds. This faculty of learning the first notes that the bird is able to distinguish, leads us to another interesting part of our subject, and we will now proceed to the experiments made by Daines Barrington, showing that the varied songs which distinguish different species of birds, are the consequence of the parental notes which first meet their ears.

The learned author states that to be certain that a nestling will not have even the *call* of its species, it should be taken from the nest when only a day or two old; because, though nestlings cannot see till the seventh day, yet they can hear from the instant they are hatched, and probably, from that circumstance, attend to sounds more than they do afterwards, especially as the call of the parents announces the arrival of their food. After stating the trouble of breeding up a bird of this tender age, and admitting that he himself never reared one, he goes on to speak of a linnet and a goldfinch which he had seen, and which were taken from their nests when only two or three days old, and to mention some other curious instances of imitation in the following terms:—

"The first of these (the linnet) belonged to Mr. Matthews, an apothecary at Kensington, which, from a want of other sounds to imitate, almost articulated the words *pretty boy*, as well as some other short sentences. I heard the bird myself repeat the words *pretty boy*; and Mr. Matthews assured me, that he had neither the note nor call of any bird whatsoever. This talking linnet died last year, before which many people went from London to hear him speak."

"The goldfinch I have before mentioned was reared in the town of Knighton, in Radnorshire, which I happened to hear as I was walking by the house where it was kept. I thought, indeed, that a wren was singing; and I went into the house to inquire after it, as that little bird seldom lives long in a cage. The people of the house, however, told me that they had no bird but a goldfinch, which they conceived to sing its own natural note as they called it; upon which I stayed a considerable time in the room, whilst its notes were merely those of a wren, without the least mixture of goldfinch. On further inquiries, I found that the bird had been taken from the nest when only a day or two old, that it was hung in a window which was opposite to a small garden, whence the nestling had undoubtedly acquired the notes of the wren, without having had any opportunity of learning even the *call* of a goldfinch. These facts which I have stated, seem to prove very deci-

sively that birds have not any innate ideas of the notes which are supposed to be peculiar to each species. But it will possibly be asked, why, in a wild state, they adhere so steadily to the same song, insomuch that it is well known, before the bird is heard, what notes you are to expect from him? This, however, arises entirely from the nestling's attending only to the instruction of the parent bird, whilst it disregards the notes of all others, which may, perhaps, be singing around him. Young *Canary* birds are frequently reared in a room where there are many other sorts, and yet I have been informed that they only learn the song of the parent cock. Every one knows that the common house-sparrow, when in a wild state, never does anything but chirp; this does not, however, arise from want of power in this bird to imitate others, but because he only attends to the parental note."

Two points in this interesting description will be noted by the observer, and the questions will occur—how was the first bird of each species taught, and is not the assertion touching the sparrow somewhat bold?

The difficulty surrounding the first is more apparent than real; for, if it be granted that species were created, all the distinctions of voice and plumage follow of course; and it will equally follow that they have been regularly transmitted down to the present period in such species as have not become extinct. With regard to the second we shall permit Mr. Barrington to speak for himself, for he *has* proved the fact:—

"To prove this decisively, I took a common sparrow from the nest when it was fledged and educated him under a linnet; the bird, however, by accident heard a goldfinch also, and his song was, therefore, a mixture of the linnet and goldfinch."

The same experimentalist educated a young robin, under a very fine nightingale, which, however, began already to be out of song, and was perfectly mute in less than a fortnight: the scholar afterwards sang three parts in four nightingale, and the rest of his song was what the bird-catchers call "rubbish," or no particular note whatever.

Bechstein observes that nearly all birds when young will learn some strain whistled or played to them every day; but those only whose memory is retentive will abandon their natural song and adopt fluently the air that has been taught them. In proof of this position, he adduces the cases of the goldfinch and bullfinch, stating that a young goldfinch will, indeed, learn some part of the melody played to a bullfinch, but will never repeat the lesson so perfectly as the latter, and that this difference is not caused by the greater or less flexibility of the organ of the voice, but rather by the superiority of the bullfinch's memory.

In the cultivation and management of the human voice, and to keep up its tone, and the power of execution, we know how necessary constant practice is; and we find the same sort of discipline resorted to both by caged birds, and those which pour forth their "wood notes wild."

"It is remarkable," says Bechstein, "that birds which do not sing all the year, such as the redbreast, siskin, and goldfinch, seem obliged, after moulting, to learn to warble, as though they had forgotten; but I have seen enough to convince me that these attempts are merely to render the *larynx* pliant, and are a kind of chirping, the notes of which have but little relation to the proper song; for a slight attention will discover that the *larynx* becomes gradually capable of giving the common warble. This method of recovering the song does not, then, show deficiency of memory, but liability to rigidity, occasioned by disuse of the *larynx*. The chaffinch will exercise itself in this way some weeks before it attains its former proficiency, and the nightingale practises as long the strains of his beautiful song, before he gives it full, clear, and in all its extent."

This "practising" is termed by our British bird-fanciers and bird-catchers, "recording," a word, according to Daines Barrington, probably derived from the musical instrument formerly used in England, called a "recorder,*" which seems to have been a species of flute, and was probably used to teach young birds to pipe notes. The term "recording" is more particularly used by the same fraternity, to distinguish the attempt of the nestling to sing, and which may be compared to the babble of a child in its imperfect endeavours to articulate.

"I have known," says Barrington, "instances of birds beginning to record when they were not a month old. This first essay does not seem to have the least rudiments of the future song; but as the bird grows older and stronger, one may begin to perceive what the nestling is aiming at. Whilst the scholar is thus endeavouring to form his song, when he is once sure of a passage, he commonly raises his tone, which he drops again when he is not equal to what he is attempting; just as a singer raises his voice, when he not only recollects certain parts of a tune with precision, but knows that he can execute them. What the nestling is not thus thoroughly master of, he hurries over, lowering his tone, as if he did not wish to be heard, and could not yet satisfy himself. A young bird commonly continues to record for ten or eleven months, when he is able to execute every part of his song,

* The passage in "Hamlet" will occur to every one.

which afterwards continues fixed, and is scarcely ever altered. When the bird is thus become perfect in his lesson, he is said to *sing his song round,* or in all its varieties of passages, which he connects together, and executes without a pause."

Barrington defines a bird's song to be a succession of three or more different notes, which are continued without interruption during the same interval with a musical bar of four crotchets in an *adagio* movement, or whilst a pendulum swings four seconds. Now let us see what notes have been detected in the song. Observers have marked F natural in woodlarks; A in thrushes; C falling to A commonly in the cuckoo; A natural in common cocks; B flat in a very large cock; D in some owls; B flat in others. Thus we have A, B flat, C, D, and F, to which Barrington adds G from his own observations on a nightingale which lived three years in a cage; and he confirms the remarks of the observer who furnished him with the list, and says he has frequently heard from the same bird C and F. To prove the precision of the pitch of these notes, the B flat of the spinnet by which he tried them was perfectly in tune with the great bell of St. Paul's. E then is the only note wanting to complete the scale; but, as he says, the six other notes afford sufficient data for making some conjectures with regard to the key in which birds may be supposed to sing, as these intervals can only be found in the key of F with a sharp third, or that of G with a flat third; and he supposed it to be the plaintive flat third, that affecting tone which, in the simple ballad, or "wild and sad" chorus, so comes home to our bosoms.

> "Oft have I listened, and stood still,
> As it came softened up the hill,
> And deemed it the lament of men,
> Who languished for their native glen."

Barrington pronounces in favour of the flat third, because he agrees with Lucretius, that man first learnt musical notes from birds, and because the cuckoo, whose "plain song" has been most attended to, performs it in a flat third. He strengthens his argument by showing that most of our simple compositions—old melodies such as "Morva Rhydland," and ancient music generally —are almost always in a flat third. The music of the Turks and Chinese, he also adduces as having half of the airs in a minor third which is "adapted to simple movements such as may be expected in countries where music hath not been long cultivated."

It will appear, however, from the following observations collected by White, in his enchanting History of Selborne, that neither

cuckoos nor owls keep to one key. One musical friend informs the natural historian that all the owls that are his near neighbours hoot in B flat. But in the next letter to the author whom we have so largely quoted, dated August 1, 1771, before the publication of that zoologist's memoir on the singing of birds, in the Philosophical Transactions, bearing date 1773, White says that a friend remarks that many (most) of his owls hoot in B flat; and that one went almost half a note below A. He adds, that a neighbour with a nice ear remarked that the owls about Selborne hooted in three different keys,—namely, in G flat, or F sharp, in B flat, and A flat. "He heard two hooting to each other, the one in A flat, and the other in B flat." The same person found that the note of the cuckoo varied in different individuals; for, about Selborne wood, he observed, they were mostly in D; he heard two sing together, the one in D, the other in D sharp, "who made a disagreeable concert;" [one should think as much.] He afterwards heard one in D sharp, and about Woolmer forest, some in C.

It may seem a rather Milesian method of treating the subject of singing birds, to dwell so long upon the notes of cocks, owls, and cuckoos; but we shall find that the distinctness and simplicity of intonation in these birds afford a much better chance of accurately determining the key than the rapid gush of song of the true warblers; and it will be necessary, before we enter upon the melodies of that exhilarating tribe, to draw the reader's attention to what may be called the conversational notes of birds.

Those which congregate in bushes keep up a constant twittering, as if to apprize each other of their presence; and all have notes expressive of alarm, or satisfaction, to say nothing of the language of incubation. These powers may be particularly remarked in the common poultry. The peculiar shrill cry with which the bird of dawning, with uplifted eye, and head raised on one side, to give the widest upward sweep to his vision, gives warning of the horrible advent of the kite or sparrow-hawk; the note with which he gallantly calls his seraglio about him, to feast on the barleycorn which he has found and saved for them; the exulting cackle of Dame Partlet giving notice that one more milk-white egg is added to the careful henwife's treasure, a cackle that is caught up from farm-yard to farm-yard, till the whole village is in an uproar, must be familiar to every one: even the newly-hatched chicken—it is White, we believe, who makes the observation—will seize a fly, if offered to it, with complacent twitterings; but if a wasp be tendered, a note of aversion and distress is the consequence.

The wild fowl, in their lofty aërial flights, keep up a constant watch-note of communication with each other; and far and wide

in the silence of night does their cry resound. The windpipes of many of these are complete wind instruments; that of the wild swan takes a turn within the sternum somewhat after the fashion of a French horn or bugle. May not these unearthly sounds, heard from on high,

"At the lone midnight hour, when bad spirits have power,"

have assisted the legends of the ghostly huntsman, and his wild chase in the air, sweeping overhead like the rush of withered leaves?

The *call*, as it is technically termed, of singing birds seems to have an almost miraculous power over the race, as the bird-catcher well knows.

"When the bird-catcher hath laid his nets, he disposes of his *call-birds* at proper intervals. It must be owned that there is a most malicious joy in these *call-birds* to bring the wild ones into the same captivity, which may likewise be observed with regard to the decoy ducks. Their sight and hearing infinitely excel that of the bird-catcher. The instant that the wild birds are perceived, notice is given by one to the rest of the *call-birds*, (as it is by the first hound that hits on the scent, to the rest of the pack,) after which follows the same sort of tumultuous ecstasy and joy. The *call-birds*, while the bird is at a distance, do not sing as a bird does in a chamber; they invite the wild ones by what the bird-catchers call *short jerks*, which, when the birds are good, may be heard at a great distance. The ascendancy by this call, or invitation, is so great, that the wild bird is stopped in its course of flight, and if not already acquainted with the nets, lights boldly within twenty yards of perhaps three or four bird-catchers, on a spot which otherwise it would not have taken the least notice of. Nay, it frequently happens that, if half a flock only are caught, the remaining half will immediately afterwards light in the nets, and share the same fate; and should only one bird escape, that bird will suffer itself to be pulled at till it is caught—such a fascinating power have the *call-birds*."*

We do not mean to detain the reader upon a bird-catching expedition—though it would be more full of interest than some would think—but he ought to know, before he goes on one, that a bird acquainted with the nets is by the bird-catchers termed a *sharper*; him they endeavour to drive away, as they can have no sport in his company. It is worthy of note, too, that even in their captivity the natural instinct of the *call-birds* is in many points no whit blunted; for the moment they see a hawk, caged though

* Barrington on the small birds of flight.

they be, they communicate the alarm to each other, by a plaintive note, nor will they then *jerk* or *call*, though the wild birds are near.*

It is in the Insessorial order† of birds that the songsters abound, but there is one remarkable exception among the Raptorial order, in that warbling African, *Le Faucon Chanteur*‡ of Le Vaillant, perhaps the only known bird of prey—Cuvier says the only known one—that sings agreeably. Its song is very sweet, but dangerous as the lay of the Syrens, and

"Mocks the dead bones that lie scattered by."

Few spots are more musical with song-birds than these islands. Not that the woods of America are mute—but they want the brilliant variety of ours; and one of her sons, who has so well deserved of the lovers of natural history in all countries, has endeavoured to colonize the Transatlantic groves with the feathered songsters of Britain. And yet they have that wonderful polyglot the mock-bird.§ Him we have seen and heard in captivity, and—but Wilson has immortalized the bird with his graphic pen, and, in all humility, we lay down ours.

"The ease, elegance, and rapidity of his movements, the animation of his eye, and the intelligence he displays in listening and laying up lessons from almost every species of the feathered creation within his hearing, are really surprising, and mark the peculiarity of his genius. To these qualities we may add that of a voice full, strong, and musical, and capable of almost every modulation from the clear mellow tones of the wood-thrush, to the savage screams of the bald eagle. In measure and accent, he faithfully follows his originals. In force and sweetness of expression, he greatly improves upon them. In his native groves, mounted on the top of a tall bush or half-grown tree, in the dawn of a dewy morning, while the woods are already vocal with a multitude of warblers, his admirable song rises pre-eminent over every competitor. The ear can listen to *his* music alone, to which that of all the others seems a mere accompaniment. Neither is this strain altogether imitative. His own native notes, which are easily distinguishable by such as are well acquainted with those of our various song birds, are bold and full, and varied seemingly beyond all limits. They consist of short expressions of two, three, or at the most five or six syllables; generally interspersed with imitations, and all of them uttered with great emphasis and rapidity; and continued, with undiminished ardour, for half an

* Barrington on the small birds of flight.
† Insessores—Perching birds.
‡ Falco musicus of Daudin.
§ Orpheus polyglottus.

hour or an hour at a time. His expanded wings and tail, glistening with white, and the buoyant gaiety of his action, arresting the eye, as his song most irresistibly does the ear. He sweeps round with enthusiastic ecstasy—he mounts and descends as his song swells or dies away; and, as my friend Mr. Bartram has beautifully expressed it, "He bounds aloft with the celerity of an arrow, as if to recover or recal his very soul, expired in the last elevated strain.' While thus exerting himself, a bystander, destitute of sight, would suppose that the whole feathered tribes had assembled together on a trial of skill, each striving to produce his utmost effect, so perfect are his imitations. He many times deceives the sportsman, and sends him in search of birds that perhaps are not within miles of him, but whose notes he exactly imitates; even birds themselves are frequently imposed on by this admirable mimic, and are decoyed by the fancied calls of their mates, or dive with precipitation into the depths of thickets, at the scream of what they suppose to be the sparrow-hawk. The mocking-bird loses little of the power and energy of his song by confinement. In his domesticated state, when he commences his career of song, it is impossible to stand by uninterested. He whistles for the dog; Cæsar starts up, wags his tail, and runs to meet his master. He squeaks out like a hurt chicken, and the hen hurries about with hanging wings, and bristled feathers, clucking to protect its injured brood. The barking of the dog, the mewing of the cat, the creaking of a passing wheelbarrow, follow, with great truth and rapidity. He repeats the tune taught him by his master, though of considerable length, fully and faithfully. He runs over the quiverings of the canary, and the clear whistlings of the Virginia nightingale or red-bird, with such superior execution and effect, that the mortified songsters feel their own inferiority, and become altogether silent, while he seems to triumph in their defeat by redoubling his exertions. * * * * * * * * * Both in his native and domesticated state, during the solemn stillness of night, as soon as the moon rises in silent majesty, he begins his delightful solo, and serenades us the livelong night with a full display of his vocal powers, making the whole neighbourhood ring with his inimitable medley."

But we must return to the singing birds of Britain, which may be divided into two classes, the regular visitors and the residents. Food is the principal motive that induces migration on the part of the former, which, like Grisi, Tamburini, Rubini, and, though last not least, Lablache, leave the more genial climes of the south to shiver in the spring of our more austere shores, delighting our ears, and revelling in the harvest made ready for them. But we are not entirely dependent on these warbling strangers, for we

number among our residents many birds that in sweetness of tone, if not in brilliancy of execution, rival the visiters.

What with the influenza and the cutting easterly winds, it has been, Heaven knows, a bitter black season for us unfeathered bipeds; but it has been worse than bitter for the birds. What a month was the

"Month before the month of May!"

well did it justify the corresponding line, telling us that

"The spring comes slowly up this way."

The berries were almost all gone, the insects wisely came not forth, and, in short, the supplies were all but stopped. Verily there hath not been much disposition

"To forestal sweet Saint Valentine"

this year. But now, while we are writing, the redstart, which seldom, it is true, appears among us before the middle of April, and is often not seen till the end of that month, is running on the grass plat, picking up its insect-food, and vibrating its tail at the close of every run, its white cap and black gorget contrasting strongly in the sunshine. It *is* a blessed change. The swallows are come, and they *do* make a spring, if not a summer.

When we proceed to enumerate the different species of singing birds, we shall inquire as to the time of year when each may be considered, generally speaking, to be in full song. At present we shall merely observe, that it depends in great measure both upon the health and spirits of the individual, and the state of the weather. Not that any of them, hardly, are to be heard in anything like full song in January, except very rarely. February, March, and April, are more and more tunable. Often, in the latter month, the chill gloomy morning, rendered more dreary by a cutting easterly wind, clears away into a fine warm afternoon. In such mornings, while Eurus predominates, everything around is silent with the exception of the murmur of the brook; but the wind changes, the clouds disperse, forth breaks the sun, the insects swarm, the tuneful stream becomes alive with the rising trouts, and the groves burst out into melody.

In May, "the mother of love," the year is more confirmed, and every garden, orchard, and copse rivals the singing-tree of the Arabian story. Now it is that the full power of song is developed; witness the clear mellow pipe of that blackbird perched on the tallest acacia in the garden, while his mate with half-shut eyes, and pressing her little ones to her bosom, listens in security on her nest in yonder hawthorn hedge spangled with its dewy May-flower blossoms.

May, 1837.

SINGING BIRDS—RESIDENTS.

"Within the bush, her covert nest
A little linnet fondly prest,
The dew sat chilly on her breast,
Sae early in the morning."

BURNS.

No: every green thing has not been sacrificed to the Frost-Genius. Nights, rivalling the *Iron Nights* of the Swedish calendar, have, indeed, done their work; and it may be doubted whether the horticulturist has had so much cause for lamentation since the "Black Spring" of 1771. Numbers are mourning their dead rhododendrons, azalias, and magnolias, and not a few have to sigh over their withered bays, to say nothing of laurustinuses and roses:—even the hardy holly has, in some places, perished in its death-struggle with the weather.

The determined lingering of winter in the lap of spring seems to have checked every effort of vegetable life, producing one of the most backward seasons remembered. This has had its effect upon the Singing Birds; for, as the food of their nestlings consists almost entirely of caterpillars and of insects generally in the early stages of development, or of worms and slugs, all of which depend upon plants for subsistence, their song, and incubation—there have been exceptions, doubtless—are late this year. We saw one instance of the ravenous eagerness with which the half-starved creatures attacked and made prey of some of the first flowers that dared to show themselves. On a fine sunny morning after the first of the one or two comparatively warm nights that came in March, the garden, which, on the preceding day had "made no sign," was bright with crocuses—every one of which the birds devoured or destroyed before noon.

Of all the British resident Song-birds, the *Merulidæ* are the most remarkable for the strength of their vocal powers, and the first of this family that claims our attention, for it is a brumal as well as an early vernal songster, is a very curious bird, not uncommon in some localities, but extremely rare in others, concerning which much of the marvellous has been written. If

we are to believe some authors, the Water-Ouzel, Water Blackbird, or Dipper,* *Der Wasserschwätzer* of the Germans, *Merle d'eau* of the French, and *Tordo del agua* of the Spaniards, deliberately descends into the water, and walks about on the bottom of the stream with the same ease and complacency as if it were stepping on the dry land. Now, to say nothing of that extremely impracticable law of which we are reminded every hour of the day, and more especially "when china falls," the structure of the bird itself is not adapted for such a feat; and though we have no doubt of its subaqueous habits, which have food more than frolic for their object, we are more than sceptical as to its pedestrian performances in such a situation. Mr. Macgillivray, who writes as none can write who have not beheld what they write about, informs us that he has seen the Dipper moving under water in situations where he could observe it with certainty, and he found that its actions were precisely similar to those of the Divers, Mergansers, and Cormorants, which he had often watched from an eminence as they pursued the shoals of sand-eels along the shores of the Hebrides. It, in fact, flew; not merely employing the wing from the carpal joint, but extending it considerably, and availing itself of the whole expanse, just as it would have done if it had been moving in the air. The general direction of the body was obliquely downwards; and great force was evidently used to counteract buoyancy, the bird finding it difficult to keep itself at the bottom. Mr. Macgillivray remarks that Colonel Montagu well describes the appearance which it presents under such circumstances; and the former goes on to state that, in one or two instances where he has been able to perceive it under water, it appeared to tumble about in a very extraordinary manner, with its head downwards, as if pecking something, and at the same time great exertion of both wings and legs was used. The bird was, we doubt not, at this time capturing the fresh-water mollusca and insect-larvæ which form its principal aliment. When searching for food, the Dipper, according to Mr. Macgillivray, does not proceed to great distances under water; but, alighting on some spot, sinks, and soon reappears in the immediate neighbourhood, when it either dives again, or rises on the wing to drop somewhere else on the water, or to settle on an insulated stone in the midst of the brook. The same ornithologist broadly, and, as we believe, truly, states that the assertion of its walking below the surface, which some persons have ventured, is neither made good by observation nor countenanced by reason. Its short legs, and long, curved claws are, as he says, very ill adapted for running,

* Cinclus aquaticus—Turdus Cinclus of Linnæus.

but admirably calculated for securing a steady footing on slippery stones, whether above or beneath the surface of the water.

The sonorous song of this extraordinary bird startles the ear as it comes mingled with the hoarse tones of the torrent, or the rushing of the wintry waterfall, sometimes in the midst of a snow-storm. Mr. Rennie, who remarks that it is one of the few birds that are vocal so early in the year as the months of January and February, heard it on the 11th of the latter month in a hard frost, when the thermometer in the morning had been at 26°, sing incessantly in a powerful and elegant style, with much variation in the notes, many of which were peculiar to itself, intermingled with a little of the piping of the Woodlark. The day was bright, whilst it was singing, but it was freezing in the shade; and the sun, which had considerably passed the meridian, was obscured from the songster by the lofty surrounding hills. The same author declares that the Dipper consumes a considerable quantity of fishes' spawn, and, especially, of the *ova* of the salmon. Bechstein, who also notices its winter music, alleges that it sings, moreover, in the night.

The nest is as curious as the bird that makes it. In shape it a good deal resembles that of a Wren, having a dome or roof, but it is not so deep. Externally it is formed of water-plants, or closely-interwoven moss: within there is a lining of dry leaves. The access to the hollow chamber is through an aperture in the side. It is often placed in some mossy bank overhanging the stream,

"Where the lady-fern grows longest;"

and has been detected under a projecting stone forming part of a cascade, and behind a sheet of falling water. Through this liquid glassy curtain the bird darted to its home. The eggs, from four to six in number, are white, and pointed at the end; and, wherever the nest is placed, such care is taken by the old birds to assimilate its hues to those of the locality, that, large as it is, the most acute eye is often unable to detect it. There is an excellent vignette of the Dipper's nest in Mr. Yarrell's delightful "History of British Birds."*

This Water Blackbird is not uncommon in Scotland, nor in the North and West of England. In Wales and Ireland it frequently occurs. Mr. Yarrell mentions one which was seen at a water-mill, near Wyrardisbury, on the Colne, about two or three hundred yards above the place at which that river falls into the Thames, just below Bell Weir, well known to the angler who

* 8vo. London. Van Voorst.

goes after the great trouts. The bird, he adds, has also been seen on the Mole, near Esher, and in Essex; but it is seldom found in the counties near London.

Next in order comes the Missel Thrush,* *la Draine* of the French, and *Misteldrossel* of the Germans. Perched on the top of the yet leafless tree, he pours forth his loud and often-repeated strain of melancholy, but musical cadences,—

"While rocking winds are piping loud,"

amid all the meteoric rudeness of February. The advent of the storm is hailed by him in notes of more than ordinary power; and so remarkable is this habit, that it has obtained for the bird, in many counties, the name of *Storm Cock*. Self-possessed and daring, this, one of the largest of the British Thrushes, will suffer hardly any animal to approach its haunts during the season of incubation: hence the Welsh call him *Pen y llwyn*, the head or master of the coppice: for he will not tolerate the presence of any thievish Magpie, Jay, or Crow, but drives them from the spot with loud cries. So pugnacious are both the sexes at this period, that the hen bird has been known to fly at the face of man when he has disturbed her while sitting. White acknowledges the success with which the Missel Thrush frequently repels the invader; but he once saw in his garden at Selborne a sad exception to the general rule. Several Magpies came down in a body, determined to storm the nest of the poor Missel Thrushes, who, "defended their mansion with great vigour, and fought resolutely *pro aris et focis*; but numbers at last prevailed; they tore the nest to pieces, and swallowed the young alive."

The food of the Missel Thrush consists of slugs, worms, insects, &c., with no small addition of berries, among which that of the misseltoe (whence its name) is a decided favourite. The nest, which is begun in April, is generally placed in the fork of a tree, sometimes carefully concealed, but, at others, remarkably exposed: it presents externally a mass of coarse stems of plants, moss, withered grasses, and lichens. Within, it is stuccoed with mud or clay, which is again lined with delicate dry grasses, on which are laid four or five eggs more than an inch long, generally of a greenish white spotted with ruddy brown, but the colour occasionally varies to pinkish or reddish white, mottled with dark red-brown hues. The bird, though plentiful nowhere, is not uncommon anywhere in Britain, and is to be found in most of the counties near the metropolis; we have seen and heard it frequently at Fulham.

* Turdus viscivorus.

Brisson named the Song Thrush,* Throstle, or Mavis, the *Small Missel Thrush*, and, indeed, it is very nearly a miniature resemblance of the last-mentioned species. But this admirable musician, to which the English and Germans have given a name expressive of its melodious pipe, goes far beyond the Missel Thrush, or, indeed, any of the tribe in Britain, in its vocal powers. From early spring, throughout the summer months, even until the autumn, this charming songster delights the rural inhabitants of this island, more especially in the morning and towards the close of day. It generally chooses the top of a high tree for its station, and we have sometimes thought its music most perfect after a genial shower on a fine warm spring evening, when the young foliage was glittering with the rain-drops, and not a breath of air disturbed the direct upward column of gray smoke rising from the neighbouring cottage.

Like all powerful song-birds, this thrush often seems to articulate words distinctly. We have heard one express, in the course of its singing, sounds which fell on the ear as if it were repeating the words—"My dear—my pretty dear—my pretty little dear." These accents were not caught up by one listener alone, who might, perhaps, have been deemed a little imaginative; but all who heard them were struck by the resemblance.

This charming species is widely spread, and has been traced eastward as far as Smyrna and Trebizond. It was evidently one of the birds that ministered to the absurd wantonness of the Roman voluptuaries in their olios of brains and tongues of singing birds. Even at the present day, as we learn from a distinguished ornithologist of that country,† it is considered among the Italians as "molto grato agli Epicurei." The luscious grapes and figs on which it there feeds are said to impart a most exquisite flavour to its flesh, which seems well appreciated by the *ex-maître d'hôtel* of Pascal Bruno's friend, the Prince Butera, when the accomplished artist treats, with all the solemnity due to the high importance of the subject, of his *Grives à la broche, au genièvre*, and *à la flamande*.‡ There is, it is true, no accounting for tastes, and we would speak with all reverence for discriminating palates; but some may think that all taste, save that for the pleasures of the table, must have vanished, before the gourmand can sit down with gratification to his dish of Song Thrushes.

The Throstle has been seen sitting on her eggs as early as the third week in January. The first brood, however, rarely makes its appearance before the beginning of April. The nest is

* Turdus musicus, *Linn.* The Germans call it Singdrossel.

† The Prince of Canino and Musignano.

‡ In "Le Cuisinier des Cuisiniers."

generally hidden in the midst of some tall bush: green moss and delicate roots form the outside; and within it is coated with a thin smooth plastering, in which decayed wood is often an ingredient, so well laid on as to hold water for some time. In this cup-like receptacle the female deposits four or five eggs of a beautiful pale blue, scantily spotted with black at the larger end. It appears, from a contributor to Mr. Loudon's "Magazine of Natural History," where will be found many pleasant anecdotes of animals and much interesting zoological information, that both sexes participate in the duties of incubation. The author of the memoir alluded to, who watched the progress of the nest, states that, when all was finished, the cock took his share of the hatching; but he did not sit so long as the hen, though he often fed her while she was upon the nest. The young were out of the shells, which the old ones carried off, by the thirteenth day.

The "Ousel Cock" may be thought too common to require notice; and yet some of our readers may not be aware that, glorying in its prodigality of voice and revelling in its mimicry, it has been known to crow like a cock and cackle like a hen. The power and quality of tone of the blackbird* is first-rate, and for these he is justly more celebrated than for execution or variety of notes. His clear, mellow, fluty pipe is first heard in the early spring, and his song is continued far into the year, till the time of moulting. He rejoices in the moist vernal weather, and is heard to the greatest advantage when

> "The stealing shower is scarce to patter heard,
> By those who wander through the forest walks."

The thickest bush is generally selected for the nest, which is matted externally with coarse roots, and strong, dry grass stalks or bents, plastered and mixed internally with earth, so as to form a kind of cob-wall. Fine grass stalks form the lining on which repose the four, five, or even six light-blue eggs, most frequently mottled with pale rufous brown, but sometimes spotless. The first hatch takes place about the end of March or beginning of April. This species, the *Schwarzdrossel* of the Germans, *Merlo* of the Italians, and *Merle* of the French and Scotch, is widely and abundantly diffused. It has been recorded by Temminck as far eastward as the Morea, and Mr. Darwin noticed it as far west as Terceira, one of the Azores: but this is no place for a lecture on the geographical distribution of birds. Albinos are not very uncommon.

The fruit consumed by the Blackbird and Song Thrush is well

* Merula vulgaris—Turdus Merula, Linn.

repaid, not only by their music, but by the good they do to the garden in destroying slugs and shell-snails. Besides their natural notes, these *Merulidæ* may be educated so as to sing an artificial song, and even articulate. Dr. Latham relates that the tame Blackbird may be taught to whistle tunes and to imitate the human voice; and Pliny tells us of the talking Thrush, "imitantem sermones hominum," which was the pet of Claudius Cæsar's Agrippina. The Hon. Daines Barrington quotes another sentence from the same chapter and book of Pliny to show that the young Cæsars had a Thrush, as well as Nightingales, eloquent in Latin and Greek. The talking Thrush belonging to Agrippina we admit; but we suspect that the learned Thrush of the "Cæsares juvenes" was no more than a starling; and, indeed, "sturnum" is the word in the Leyden edition (1548).

The Larks, those brilliant vocalists, next claim our notice, and with the Sky-Lark or Lavrock* we begin. Fear not, reader; there is no description coming of the variety of the intense gushes, the prodigal outpourings of this Ariel of song, as he mounts till the eye can no longer follow him, though the ear still drinks his wild music. We are not in a frame of mind for such attempts; we have just read those beautiful lines that close the most soul-stirring of all biographies†—lines describing, with all the touching fervour of a holy poetry, the affecting incident that made its way to the hearts of the mourners when they laid in the earth the daughter of the great and good Sir Walter—

"The minstrel's darling child."

Who, after reading that mournful and thrilling page, will not denounce the sacrilege of depriving the sky-lark of his liberty?

Of all the unhallowed instances of bird-incarceration, (not even excepting the stupid cruelty of shutting up a Robin in an aviary,) the condemnation of the Sky-lark to perpetual imprisonment is surely the most repugnant to every good feeling. The bird, whilst his happy brethren are carolling far up in the sky, as if they would storm heaven itself with their rush of song, just at the joyous season—

"When wheat is green, when hawthorn buds appear,"

is doomed to pine in some dingy street. There, in a den with a solid wooden roof, painted green *outside*, and white, glaring white, *within*—which, in bitter mockery, is called a *Sky*-lark's cage, he

* Alauda arvensis.

† Memoirs of the Life of Sir Walter Scott, Bart. by J. G. Lockhart, Esq., his literary executor.

keeps winnowing his wretched wings, and beating his breast against the wires, panting for one—only one—upward flight into the free air. To delude him into the recollection that there are such places as the fields, which he is beginning to forget, they cut what they call a turf—a turf dug up in the vicinity of this smoke-canopied Babel of bricks, redolent of all its sooty abominations, and bearing all the marks of the thousands of tons of fuel which are now suffered to escape up our chimneys, and fall down again upon our noses and into our lungs,—tons, which, when our coal-mines begin to shrink alarmingly—'tis no laughing matter, the time must come—some future Arnott* will, perhaps too late, enable the public to save, while he, at the same time, bestows upon them the blessing of a pure atmosphere. Well, this abominable lump of dirt is presented to the Sky-lark as a refreshment for his parched feet, longing for the fresh morning dews. Miserable as the winged creature is, he feels that there is something resembling grass under him; and then the fond wretch looks upward and warbles, and expects his mate. Is it possible to see and hear this desecration of instinct unmoved? and yet we endure it every spring, and moreover we have our Society for Preventing Cruelty to Animals.

When free, the Sky-lark never sings on the ground: his notes are first heard early in the year, and his song is continued far into the summer. About the end of April or the beginning of May the nest is placed snugly among the corn or herbage, and rests upon the earth. It is framed of the stalks of plants, with an inside lining of fine dried grasses, and contains four or five greenish-white eggs, spotted with brown. The first family is generally ready for mounting into the air by the end of June; and a second brood is usually fully fledged in August. It is most persevering in the great business of incubation; and, if the early nests are taken, will lay on till September. Such "philoprogenitiveness" may account for the swarms that cover the face not only of this but other countries in the autumn and winter, when the fatal net entangles hundreds at a time, and thousands fall a sacrifice to the various engines which are at work to bring them to the poulterer's stall. The duty paid on these victims at Leipsic amounted, when Dr. Latham wrote, to twelve thousand crowns per annum, at a grosch, or twopence halfpenny sterling, for every sixty larks. The first impulse is to regret the sacrifice of so sweet a singer: but if these myriads were left unmolested, what would become of the other species—what would become of the Sky-larks themselves?

* We by no means intend to insinuate that the present gifted philosopher is unable to effect this; we believe that he could: but revolutions to be stable should be gradual, or they are apt to end in smoke.

Still they must be seen on the board with regret; pretty accompaniments though they be to claret when dressed *à la broche*, and certainly consolatory when served *à la minute* or *en caisse*.

The Wood-lark,* if it cannot compete with the Sky-lark in variety of notes, must be allowed to surpass it in the rich and melodious quality of its tone. It sometimes sings on a tree, but its favourite position for exerting its charming powers is in the air, and it may be known to the eye of those whose ear, unaccustomed to distinguish the song of birds, would not detect the difference, by its flight in widely-extended circles; whereas the Sky-lark keeps rising almost perpendicularly in a spiral direction, till it is lost in the clear blue above. The Wood-lark, which is a comparatively scarce bird with us, appears to be much more enduring on the wing than the Sky-lark, and will sometimes continue in the air, soaring to a great height, singing, still singing, for an hour together. It begins to breed early in the season. Colonel Montagu found the nest, which is not unlike that of the Sky-lark, with eggs in it, on the fourth of April. A few fine hairs are sometimes added to the lining, but the situation chosen for it, though on the ground, is more frequently in wild and barren lands, shielded by rank grass, a tuft of furze, or a stunted bush, than in cultivated districts. The eggs, about four in number, are brown, mottled with grey and ash-colour. Unlike the preceding species, the Wood-lark does not assemble in flocks in the winter, but would seem rather to keep together in families of from five to seven. It is a very early songster, and, in favourable weather, will begin its melody soon after Christmas.

The Pipits or Tit-larks,† though in many points resembling the true larks, differ so much in others that they have been generically separated. The Meadow Pipit is the most common: its nest is placed on the ground, and the song, which is sweet but short, is not commenced till the bird has attained a considerable elevation in the air, whence, after hovering a little, it descends warbling till it reaches the ground. In captivity, the Meadow Pipit is highly valued by bird-fanciers for its song.

There is not much music among the Tit-mice,‡ though the Long-tailed Tit,§ in the spring, warbles a pleasing but low melody near its bottle-shaped nest; and, as the Buntings‖ hardly deserve the name of song-birds, we pass from them to the other "finches of the grove." The song of the Bullfinch¶—we do not

* Alauda arborea.

† Anthus aquaticus—Rock or Shore Pipit. Anthus pratensis—Meadow Pipit.

‡ Parus—Tomtits.

§ Parus caudatus

‖ Emberiza.

¶ Pyrrhula vulgaris.

mean the low whistle which is its call-note—is of a modest softness and sweetness, but murmured in such an under-tone as to require a close proximity to the bush whence it proceeds to make the ear aware of it. Its docility in learning to whistle tunes in captivity is well known ; and those who have once possessed a musical pet of this description will know how to "share Maria's grief" for the loss of her favourite. Numbers of these performers are imported annually from Germany, where there are regular schools for teaching them*. The thick underwood, or a low close-leaved tree, is most frequently selected for the nest, which is made of small sticks, and lined with a few root fibres: the four or five bluish-white eggs are spotted with pale orange-brown.

The Greenfinch or Green Linnet†, though not gifted with many natural notes, is prized in confinement for its facility in acquiring those of other birds. It soon becomes familiar with its mistress, and has been known to make free with the soft delicate downy hair on the back of her snowy neck, probably prompted to this rape of the lock by the instinct which urged the poor bird to prepare materials for a nest which was never to be built. In a state of nature, the thick hedge, close bush, or impervious ivy, hides the nest of moss and wool lined with fine hair and feathers, which is seldom complete before the end of May or beginning of June, and the four or five bluish-white eggs are speckled with light orange-brown.

The common Brown Linnet's‡ "lay of love," though not long, is very sweet; this bird, from the changes in its plumage consequent on the seasons, has lost its individuality with some authors, and has been described, according to the state of its dress, as the Linnet or Grey Linnet and the Greater Redpole. A bush of furze is a favourite place for the nest, which is framed of interwoven moss, grass, stalks, and wool, lined with hair and feathers; the eggs, amounting to four or five, are bluish-white, mottled with purple-red.

We now come to one of the most common of our English birds, the Chaffinch§, whose song seems as much neglected in England as it is worshipped on the continent. Not that there are no instances of its melody being prized with us, and indeed as much as five guineas have been given for one with an uncommon note; but with the Thuringian, the admiration of the Chaffinch's song becomes a passion. He will travel miles if he hear of the arrival

* There are some of these academies in Hesse and Fulda, and at Waltershausen.

† Loxia Chloris, *Linn.*—Fringilla Chloris, *Temm.*

‡ Fringilla cannabina.

§ Fringilla Cœlebs.

of a wild one with a good note from a neighbouring country, and will sell his cow to possess it. He has created a set of terms to designate the eight different "songs" which his ear has detected, and, when he obtains a bird that sings the best of these in perfection, hardly any price will tempt him to part with it. To procure a good Chaffinch, a common workman will deprive himself almost of necessaries till he has saved the money which is to make him happy by the possession of his favourite songster. The Thuringian *Fanatico* carries his admiration to an excess that would be incredible if Bechstein had not given the details with a most amusing fidelity, describing at length all the songs, from the *Double Trill of the Hartz*, the *Reiterzong*, and the *Wine-song*, to the *Pithia* or *Trewethia*. To his interesting and well-translated book we refer those who are curious in tracing such phenomena of the human mind: the passion for the rare varieties of the Chaffinch's song appears to be, with reference to the ear, what the Tulip mania was, and, indeed, in great measure, is, with regard to the eye.

The nest of the Chaffinch in this country is a masterpiece of art: in the fork of some ancient apple-tree, venerable with mosses and lichens (which are carefully collected for the outside of the symmetrical fabric so as to make it assimilate with surrounding objects), this fine piece of workmanship of closely-interwoven wool and moss is fixed: feathers and hair render the inside a soft, warm, cozy bed for four or five bluish-white pink-tinged eggs, which are variegated with spots and streaks of impurpled red. The love-note of the cock Chaffinch is heard almost as soon as that of the Blackbird; for the species is very early in preparing for the hopes of the year.

The *débonnaire* Goldfinch* builds one of the most elegant nests that our English Finches produce: moss, lichens, wool, and dry grass, artistically intertwined form the outside of the fabric, which is generally hidden in a quiet orchard or secluded garden, where, in the midst of some evergreen—an arbutus perchance—it is protected from the prying eye by the compact, leafy screen of the well-grown, healthy shrub: the delicate down of willows, or dwarf early-seeding plants, the choicest lamb's wool and the finest hair, form the warm lining on which the bluish-white eggs, dotted with a few rich brown spots, are deposited. The beautiful plumage and sweetly-varied song of the Goldfinch make it a great favourite; hence it is frequently consigned to captivity, and taught to draw its water in a little fairy bucket, or to perform many tricks, some of which have quite a theatrical air: a looking-

* Carduelis communis—Fringilla Carduelis, *Linn.*

glass is frequently provided for it, and, from the solace which the mirror affords to the bird, it has been supposed to be the vainest of finches. Let us not, however, be too sure that all this ogling of the reflected form is mere admiration of its own sweet person. Pause, fair lady, before you pronounce this bird to be a little coxcomb. The plumage of the sexes is very nearly similar, the hues of the female being only rather less brilliant, and the prisoner daily deludes himself that the mate which he is doomed never to see is come to visit him.

Most affectionate in disposition, it seems absolutely necessary to the Goldfinch's existence that he should have something to love. The translator of Bechstein's little book above alluded to informs us that Madame —— had one that never saw her depart without making every effort to quit his cage and follow her; her return was welcomed with every mark of delight; she approached —a thousand winning gestures testified his pleasure; she presented her finger, and it was caressed with low and joyous murmurs: "this attachment," continues the narrator, "was so exclusive, that, if his mistress, to prove it, substituted another person's finger for her own, he would peck it sharply, whilst one of his mistress's, placed between two of this person's, would be immediately distinguished and caressed*."

The finches are, for the most part, granivorous: it is not to be supposed, however, that they do not occasionally feed on caterpillars, especially in the early part of the year; but seeds form their staple, and some are of opinion that the Goldfinch never touches insects; but we now turn to a group of singing-birds whose nourishment is principally derived from those animals.

The Stone-chat† pours forth its varied and pretty song as it hovers over the golden furze which contains its nest; and the Pied Wagtail‡, a resident in the southern counties of England, warbles to its mate very early in the year from the cattle-shed or the garden-wall, though it is more familiar to us as it runs along the grass-plat or by the margin of the pond, capturing its insect-food. The scarce Dartford Warbler§, like the Stone-chat, utters its hurried trill on the open downs, generally while hovering over the furze, in which it hides itself on the slightest alarm. The familiar Hedge-sparrow‖ cheers us with its agreeable song at a very early period of the year, when bird-music is scarce.

* "Cage Birds, &c., by J. M. Bechstein, with notes by the translator; small 8vo. London: Orr and Smith.

† Saxicola rubicola.

‡ Motacilla alba.

§ Sylvia provincialis.

‖ Accentor modularis.

The notes of the Gold-crested Wren*, the smallest of British birds, can hardly be called a song, but they salute the ear in the beginning of February, and the beautiful little bird, with its elegant nest and pale-brown eggs, weighing nine or ten grains each—the bird weighs no more than eighty—must not pass unnoticed. A pair, which took possession of a fir-tree in Colonel Montagu's garden, ceased their song as soon as the young were hatched; and, when they were about six days old, he took the nest and placed it outside his study window. After the old birds had become familiar with that situation, the basket was brought within the window, and, afterwards, was conveyed to the opposite side of the room. The male had regularly assisted in feeding the young ones as long as they remained outside the window; and, though he attended the female afterwards to that barrier, he never once entered the room, nor brought any food while the young were in it. But the mother's affections were not to be so checked:—she would enter, and feed her infant brood at the table where Colonel Montagu was sitting, and even while he held the nest in his hand. One day he moved his head as she was sitting on the edge of the nest which he held. She instantly retreated—so precipitately, that she mistook the closed for the open part of the window, dashed herself against the glass, and lay apparently breathless on the floor for some time.

Neither the fright nor the hurt could, however, overpower her maternal yearnings. Colonel Montagu had the pleasure of seeing her recover, and soon return, and she afterwards frequently fed her nestlings while he held the nest in his hand. The little mother's visits were generally repeated in the space of a minute and a half, or two minutes, or, upon an average, thirty-six times in an hour; and this continued for full sixteen hours in a day, which would amount to seventy-two feeds daily for each, if equally divided between the eight young ones, amounting in the whole to five hundred and seventy-six. "From examination of the food," says the Colonel, "which by accident now and then dropped into the nest, I judged, from those weighed, that each feed was a quarter of a grain upon an average, so that each young one was supplied with eighteen grains weight in a day; and, as the young birds weighed about seventy-seven grains when they began to perch, they consumed nearly their weight of food in four days at that time. I could always perceive by the animation of the brood when the old one was coming; probably some low note indicated

* Regulus cristatus. There are two species, viz., Regulus aurocapillus (Gold-crested Regulus), and Regulus ignicapillus (Fire-crested Regulus).

her approach, and, in an instant, every mouth was open to receive the insect morsel."

When, we made our annual pilgrimage last year to Mr. Waterer's at Knapp Hill, we were attracted, even surrounded as we were by that wilderness of sweets—that assemblage of all that is rich and delicate in colour, when the azalias and rhododendrons form one splendid mass of bloom, almost too beautiful for this earth—by one of these little birds that had her nest in a yew hedge skirting one of the paths. An intelligent lad pointed out the "procreant cradle," put in his hand, and took out one of the young ones, then nearly fledged. After it had been viewed and admired—for it was very pretty, as most young birds are not—he replaced the tiny creature, and, to the inquiry whether the parents would not forsake the nest if so disturbed, he replied in the negative, adding that they were old acquaintance, and "didn't mind," for he often took the young ones out to "see how they got on." As soon as the nestling was returned to its happy home, the parent that had been watching the proceedings from a neighbouring rhododendron gorgeous with flowers, among which her small bright streak of a crest still shone brilliantly, repaired to her family, and covered them with her wings, as if nothing had happened. We trust that Mr. Waterer's noble collection has been spared by the ruthless season which, even now, chills us as we write; but we shall go to Knapp Hill under the fear that his lovely and rare hybrids have been sadly scathed. The air is pure and mild there, it is true; but his Americans—

"All unfit to bear the bitter cold,"

must have had a severe trial, when hardy, indigenous plants have suffered.

Although the Gold-crested Wren braves our severest winters, it appears to be very susceptible of cold, as well as the common Brown Wren of our hedges. The Hon. and Rev. W. Herbert informs us that, in confinement, the least cold is fatal to them. In a wild state, he says, they keep themselves warm by constant active motion in the day, and at night secrete themselves in places where the frost cannot reach them: but he apprehends that numbers perish in severe winters. He once caught half a dozen Golden Wrens at the beginning of winter, and they lived extremely well upon egg and meat, being exceedingly tame. "At roosting-time there was always a whimsical conflict among them for inside places, as being the warmest, which ended, of course, by the weakest going to the wall. The scene began with a low whistling call among them to roost, and the two birds

on the extreme right and left, flew on the backs of those in the centre, and squeezed themselves into the middle. A fresh couple from the flanks immediately renewed the attack upon the centre, and the conflict continued till the light began to fail them. A severe frost in February killed all but one of them in one night, though in a furnished drawing-room. The survivor was preserved in a little cage, by burying it every night under the sofa cushions; but having been, one sharp morning, taken from under them before the room was sufficiently warmed by the fire, though perfectly well when removed, it was dead in ten minutes."

The common Wren* is too often shot by the sportsman for the sake of the tail-feathers; these, when skilfully manipulated, admirably represent the spider of February, March, and April, when anything like an insect is considered a *bonne bouche* by the trout; and, indeed, the deceit, if lightly cast by a nice hand on the ripple, is sure to take fish, and good ones, too, "if," as old Izaak hath it, "they be there." The bird may be followed up and down the hedge-row till it will suffer itself to be taken by the hand. Then borrow—steal if you will—two or three of the precious feathers—but let the little warbler go to enjoy its liberty, and furnish "Wren's tails" for another year.

We must not forget the Redbreast, as we conclude this imperfect sketch of Resident British Song Birds, already too long. This, the familiar household bird, with its innocent confidence, would, we might have hoped, bear a charmed life everywhere: but no. Sonnini tells us that it arrives in the Levant in October, seldom passing into the open islands, but seeking the luxuriant myrtle-groves of Scio, and those other isles which offer shade and shelter. There the Greek bird-catcher takes them by dozens in the snares to which, assured by the presence of their murderer, they offer themselves; and the same war is waged against them, we are sorry to add, in other foreign countries, that one more dish may be added to the luxury and profusion of the table of Dives. With us this friendly bird is, and we trust ever will be, sacred. When everything is fettered by frost—

> "When icicles hang by the wall,
> And Dick the shepherd blows his nail"—

even then the plaintive warbling of the Robin is heard; as if to remind man that, amidst all the apparent desolation, Nature is not dead, but only sleeps, like the Beauty in the wood, to awake with all her former charms renewed.

May, 1838.

* Troglodytes Europæus, Motacilla Troglodytes, Linn.

SINGING BIRDS—VISITERS.

" Glad moment is it when the throng
Of warblers in full concert strong,
Strive—and not vainly strive—to rout
The lagging shower, and force coy Phœbus out;
Met by the rainbow's form divine
Issuing from her cloudy shrine."

WORDSWORTH.

How different has the season been from that which frowned when we last addressed our readers on this subject. In the present year the honest ancient severity of winter bringing to our comparatively open southern waters clouds of hyperborean web-footed fowl, has been followed by a good old-fashioned spring, with the hawthorn in bloom, and even the oak-leaf out near, London early in May—such a spring as we remember in our childhood, when the live-long day was passed in the balmy open air. How tranquil was it to lie among the high and thick sward, already *hained up* for the scythe, on the verge of the orchard, then one sheet of blossom, looking askant at the insects in their gold-be-dropped and gorgeously emblazoned coats, climbing up the stalks of the herbage to gain vantage for their flight, or gazing into the clear blue heaven above in speculation whether the mote, all but invisible, were the lark, whose carol mellowed by distance fell upon the ear, while the little sister, near at hand

—" As in the shining grass she sat conceal'd,
Sang to herself;"

and then the importance with which we returned to the house, big with the secret that we had discovered the nest of some errant turkey or guinea-hen, which all the acuteness and experience of the dairy-maid had failed to detect. Those were happy days:—but this is prosing; and we proceed to fulfil our promise of passing rapidly in review those melodious visiters who hasten from foreign lands to make the hedge-rows, orchards, and gardens of these fortunate islands their nuptial bowers.

This is no place for physiological discussion, and our patrons may be assured that they are not about to be drawn into a dissertation on the general organization of the feathered tribes; but there are few who have thought at all on the subject who have not been struck with the provision against the entire loss of progeny which would otherwise arise from the acts of those who rob nests for profit or wantonness. The eggs abstracted from the nests of the *Phasianidæ*,* *Tetraonidæ*,† Plovers, and a long list of others, are frequently replaced by the females as long as the number appears to be incomplete. The pilferings of the schoolboy bear hard upon the constitutions of the *Merulidæ*‡ and the smaller birds; but, unless nature is quite exhausted by repeated robberies, the bereaved parents set about constructing a new nest, finish it, and replenish it. How is this effected? By one of those beautiful adaptations which meet the zoologist at every turn, and bring home to his heart the wisdom and benevolence of the Creator. On the breast of the sitting hen is a *plexus*, or net-work of blood-vessels, which are completely filled during the time of incubation; but as long as there is a demand for eggs, and the bird goes on laying, the blood is directed internally, in order to secure the supply till the full complement is laid. When that is accomplished, the blood is no longer sent inwards, but is determined to the *plexus* on the breast; and no doubt the smooth and rounded surfaces of the eggs are soothing to the heated bosom of the mother, making her apparently hard and close confinement a labour of pleasure as well as love.

We shall have occasion in the course of this sketch to present some striking instances which show that among other mental powers—yes, mental, for it is certain that birds are gifted with something beyond mere instinct—the songsters who visit us in the season of love, joy, and hope, have very retentive memories. Year after year, if they escape the ravages of the hawk, or of the still more destructive gun, the same pair of visiters will return to the identical nest in its cosy nook, if rude hands have not destroyed the comfortable little home. By those who respect their loves and domestic arrangements our feathered summer visiters are looked for as friends returning from a far country, and their first appearance on some warm dewy spring morning at the trellis of the cottage door, or the ivied window, or in the well-known laburnum or lilac, is hailed by true lovers of nature with a thrill of pleasure. The songsters themselves seem hardly less pleased when they find all right; and while they warble right

* Pheasants, common fowls, &c. † Grouse, partridges, &c.
‡ Blackbirds and thrushes.

merrily, peer down through the open window with their bright little eyes, as who should say, "there you all are at breakfast in your old places, good luck t'ye."

In passing our feathered friends in rapid review, we think it better not to notice them in the order of their coming, but rather according to their powers of song: thus the *Muscicapidæ*, or fly-catchers, and the swallows, have no great pretensions to music, though musical to a certain degree they are, and we will commence with them.

The spotted fly-catcher (*Muscicapa grisola*) can hardly be said to be a song-bird, for a chirping call-note forms his whole musical stock; but it is one of the most welcome and constant of our migratory birds, and the untiring zeal with which it clears the neighbourhood of small insects, such as gnats, make it a cherished guest. Perched on the top of a stake, or a post, or an upper gate-bar, or an outlying branch, the bird remains motionless, till some luckless insect, humming his lay as carelessly as his brother "water-fly," the dandy, hums the favourite air of the last new opera, comes within his range; off darts the fly-catcher, finishing the song and the life of the performer at the same instant, and returns to his station to repeat the exterminating process through the whole day. He is one of our latest visiters, seldom arriving till late in May,* and his quiet hair-brown coat and his dull white waistcoat, spotted and streaked with dark brown, are rarely seen till the oak leaf has well burst the bud. As soon as the bird arrives, it sets about the work of incubation.

"The fly-catcher," says the inimitable author of the "History of Selborne," "is of all our summer birds the most mute and the most familiar; it also appears the last of any. It builds in a vine or sweetbriar against the wall of a house, or in the hole of a wall, or on the end of a beam or plate, and often close to the post of a door, where people are going in and out all day long."

We observed a pair for several years, which built in a trellised porch covered with woodbine and the white sweet-scented clematis, undisturbed by the constant ingress and egress of the inmates, many of whom were children, or the early and late arrivals and departures of guests. Few places indeed come amiss to this familiar bird as a locality for its nest. Thus a pair—rather improvident architects those—built on the head of a garden rake, which had been left near a cottage.† Two others made their nest in a bird-cage, which was suspended with the door open from a branch in a garden.‡ Another pair chose the angle

* In White's Calendar the earliest and latest periods noted, are May 10 and May 30: in Markwick's, April 29 and May 21.

† Magazine of Nat. Hist., vol. i. ‡ Blackwall.

of a lamp-post in a street at Leeds, and there they reared their young.* A nest with five eggs was found on the ornamental crown of a lamp near Portland-place,† and this nest was seen by the well-known author of "British Birds and British Fishes," on the top of the lamp at the office of Woods and Forests, in Whitehall-place.

"Of three cup-shaped nests before me," says Mr. Yarrell, "one is formed on the outside of old dark-coloured moss, mixed with roots, the lining of grass stems, with only two or three white feathers; the second has the bottom and outside of fresh green moss, lined with a few grass bents, long horse-hairs, and several mottled feathers, apparently those of a turkey; the third is similar to the last in the outside, but lined with long horse-hairs, wool, and feathers."

As a proof of the memory of this species, and *something more*, we may mention a fact recorded by Thomas Andrew Knight, Esq., the late lamented president of the Horticultural Society of London. A pair built in his stove for many successive years. Whenever the thermometer in the house was above 72°, the bird quitted her eggs; but as soon as the mercury sank below that point, she resumed her seat upon them. The four or five eggs of this interesting little bird are white, with a bluish tinge, spotted with a faint red, and the worthy male is most assiduous in feeding the female while she sits; and that as late as nine o'clock at night.‡

One word in favour of these poor little birds, which are too often mercilessly shot as fruit-eaters. That they may be seen about cherry and raspberry trees, when the fruit is ripe, there is no doubt, but Mr. Yarrell observes—correctly in our opinion—that they seem rather to be induced to visit fruit-trees for the sake of the flies which the luscious fruits attract, than for the sake of the fruits themselves, since, he tells us, on examination of the stomachs of fly-catchers killed under such circumstances, no remains of fruit were found.

But whence comes this insect-destroyer, so common on every lawn, and in every garden? From the arid regions of Africa, where its range extends to the west, and even to the south, as far as the Cape.

In the pied fly-catcher (*Muscicapa atricapilla*), a much more rare visitant, we have the powers of song more developed. Its notes, according to Mr. Blackwall, are varied and pleasing, and are compared by Mr. Dovaston to those of the redstart. The male of this pretty species, with his deep black back, and under covering of pure white, with which the forehead and wings are also

* Atkinson. Compendium of Ornithology. † Jesse. ‡ White.

marked, is, together with its more sombre partner, comparatively abundant near the charming lakes of Cumberland and Westmorland. Seven or eight eggs, of a uniform pale blue, are laid in a rather inartificial nest of grass and roots, dead bents, and hair, in holes of decayed trees, oaks principally. In feeding, it resembles the common fly-catcher. The south of Europe, particularly the countries that border the Mediterranean, abound with this species.

In the *Hirundinidæ*, or swallow family, we have another form of insect-scourge. The attacks of the fly-catchers are desultory, and may be compared to those of an enemy in ambush; but the swallows come upon the insect hosts in legions, charging and dashing through their ranks with their open fly-traps of mouths. The ranks close, as does a column of infantry or cavalry through which the cannon has cut a lane; but the winged foe wheels round again, and as the "insect youth" dance in the sun, annihilates hundreds. The survivors, like their brother mortals, pursue their dance, and in the midst of life are in death. It may seem strange at first sight to see the *Hirundinidæ* mentioned as songsters; but to say nothing of the exhilarating cry of the swift as he darts round the steeple, or of the twitter of the window-swallow and the bank or sand martin—sounds which all assist in making the air musical, and "aid the full concert"—the chimney-swallow, *Hirundo rustica*, can warble, softly indeed, but sweetly.

"The swallow," says White, "is a delicate songster, and in soft sunny weather sings both perching and flying: on trees in a kind of concert, and on chimney-tops."

This charming bird, the harbinger of spring, has been welcomed in all countries, and will be so welcomed as long as the seasons last. The poets of all ages have hailed his advent; and our own Davy, with whose deep philosophy the poetical temperament was strongly mingled, has pronounced his history in a few bright and true words:

"He lives a life of enjoyment amongst the loveliest forms of nature: winter is unknown to him; and he leaves the green meadows of England in autumn for the myrtle and orange-groves of Italy, and for the palms of Africa.*

The *Hirundinidæ* which visit this country are, the species last above mentioned, the martin (*Hirundo urbica*), the sand-martin (*Hirundo riparia*), the common swift (*Hirundo*† *apus*), and—but very rarely—the alpine or white-bellied swift (*Cypselus alpinus*).

The chimney-swallow makes his appearance amongst us earlier or later, according to the mildness or severity of the season, but the

* Salmonia.

† Cypselus of modern authors.

10th of April appears to be the general average of the time of its arrival; the earliest period noted by White is the 26th of March, and the latest the 20th of April; the 7th of April and the 27th of that month, are the respective dates recorded by Markwick. The old French quatrain thus celebrates his habits:

> "Dans les maisons fait son nid l'Hirondelle,
> Ou bien souvent dans quelque cheminée:
> Car à voler légèrement est née,
> Tant qu'il n'y a oyseau plus léger qu'elle."

He who would hear the swallow sing must rise early, for the bird is a matutinal songster, as Apuleius well knew. It would be a waste of time to do more than hint at the exploded fables of swallows retiring under water in the winter, though from time to time some worthy goody or gaffer even now tries to revive them, not without some recipients of the tale, so prone is the human mind to catch at any thing wonderful, and so constantly does error again rise to the surface! but the evidence of the migration of the whole family is now so complete and irresistible, that it amounts to absolute proof. Again and again have they been seen crossing the sea, sometimes dropping into it to take a marine bath, and then pursuing their journey refreshed and exhilarated.

The martin, with his pure white lower back and under parts, most probably turns his neb northward, from Africa, at the same time with the swallow, but his powers of wing cannot keep pace with the extensive sail of the latter, and he generally arrives a few days later. The earliest and latest periods recorded by White are the 28th of March and the 1st of May, and those given by Markwick are the 14th of April and the 18th of May.

The sand-martin arrives earlier than either of the other two species. The earliest and latest dates noted by White are the 21st of March and the 12th of April; Markwick's are the 8th of April and the 16th of May. The average time of the arrival of the common-swift is early in May; but White saw it as early as the 13th of April, and the latest time noticed by him is the 7th of May. Markwick never saw it earlier than the 28th of April, and the latest arrival observed by him was the 19th of that month.

The great alpine-swift, which chooses the highest rocks and the most towering cathedrals for his nesting places, can only be considered as an accidental visiter to these islands, and does not appear to have been seen here earlier than in June.

The architecture of the three first species of this family here noticed, deserves attention. Early in the season the swallows and house-martins may be seen on the ground in moist places, or near the edges of ponds or puddles. They are then collecting the clay

or mortar, which, strengthened with straws and grass-stems to keep it together in the case of the swallow, is to form their nest. One course or *raise* only, as the Devonians call it, is laid on at a time, and that is left to settle and dry before the next is added, as men proceed in making a cob-wall, and thus the work proceeds, day after day, till the saucer-shaped nest of the swallow and the hemispherical cob-house of the martin are complete.

The sand-martin proceeds upon a different plan: he is a miner, and excavates his dwelling in the sand-bank, as the ancient Egyptian carved his temple out of the solid rock. Look at the bill of this little bird. Though small, it is hard and sharp, and well our sapper knows how to use it. Clinging to the face of the sand-bank with its sharp little claws, and closing its bill, the bird works away with its natural pickaxe, till the hard sand comes tumbling down on all sides. Round he goes, now with his head up, now down, till he has planned his circular cave as regularly almost as compasses could do it; and yet he does not trace it out from a fixed point in the centre, but works from the circumference. When he has well broken ground, he tunnels away as truly as Sir Isambard himself, and while the bird works into his excavation, he shifts his position as the necessities of the case require; now he stands on the floor, now he clings to the roof with his back downwards, and how carefully does he remove the rubbish from the upward inclined floor with his feet, taking care not to disturb its solidity. But we must pause, and refer those who may be interested in the operations of this industrious little bird to Mr. Rennie's excellent description—we can vouch for its accuracy—in his "Architecture of Birds," a book in which every lover of nature will find amusement and instruction.

The nest of the common-swift is a farrago of bits of rag, a feather or two, dry grass-blades and stems, and fragments of straw: but these materials appear to be cemented or glued together. What this glue is composed of is not known, though some have supposed it to be the saliva, or a mucous secretion of the bird itself.

The nests of the Chinese-swallow, with which the brother of the sun and moon enriches his soup when they are clean and fair, and glues his bamboo-seat when they are dark and dirty, are said to owe their glutinous quality to *Ulvæ*, or sea-weeds, like our laver, worked up by the builders. But the nest of the common-swift, which is deposited under the eaves of the old house or church, in a hole in a steeple, or in some antiquated turret, has generally a very compressed appearance, the result of the pressure of generation after generation there hatched and reared.

Here again we have strong evidence of the memory of birds. Dr. Jenner proved by the most irrefragable evidence, that the same pair of birds returned to the same nest year after year. Theirs is a chequered life. When the sun shines bright, and all the insect-world is stirring, the swifts are sporting in the brilliant summer-light, and sailing in the air in all the luxury of enjoyment; but let a windy stormy time come—where are they then? Laid up in solitude and darkness, hour after hour, in their gloomy nesting-places, to climb into which their short feet are admirably adapted, for all four of the toes are turned forward to aid them in creeping into their narrow dormitories.

We cannot quit this family without adverting to a charge made against some of the species—abandonment of their young. This has been proved against the swallow and the martin; and the swift has been suspected, whether justly or not we shall presently inquire.

There is no doubt that late broods of swallows have been left by their vagrant parents to perish in their nests by the most distressing of deaths; and as little that the martins are guilty of the same desertion. Dr. Jenner has recorded the fact against a pair of martins which hatched four broods in one year: the last hapless brood came into existence early in October, and about the middle of the month the old birds went off, and left their nestlings, then about half-fledged, to die. They returned to the nest on the 17th of May, in the next year, and threw the skeletons out. Mr. Blackwall* has put the frequent occurrence of this unparental act beyond doubt. Among many other evidences, he has seen a pair of house-martins, after taking possession of an old nest, draw out the dried bodies of three nearly full-fledged nestlings, before they established themselves therein. About the same time, and near the same place, another pair endeavoured to get rid of the dead bodies of the victims; their efforts to dislodge the carcasses were ineffectual, and they then closed up the aperture of the nest with clay, thus converting it into a sepulchre. At first Mr. Blackwall was disposed to attribute the untimely death of the nestlings to the accidental destruction of one or both parents; but the accumulated evidence forbade any other conclusion than that these cases of protracted suffering and ultimate dissolution, were the result of voluntary abandonment. May not the praises bestowed of old upon the swallow for its piety in burying its dead, have taken their origin from some such facts as one of those recorded by Mr. Blackwall?

But how are we to account for this perversion of the parental

* Researches in Zoology.

feeling—that all-absorbing affection for offspring which, in birds especially, is paramount? We find an answer in another law, stronger even than parental affection, the law of self-preservation. What were the unhappy parents to do? Beguiled by the sunny skies of a fine autumn, they hoped to rear their broods; but with the advancing season came churlish days and nipping frosts, destroying their insect food, and making their case desperate. Go they must, or perish likewise; and the love of life prevailed.

We have observed in the west of England, the extreme anxiety of the parent birds to get a late brood out of the nest in time for the general departure. Towards the end of last September, a pair of martins seemed at their wit's end to get their nestlings to leave the nest over the porch of the dwelling-house. At last, one Sunday evening, all the martins in the parish seemed to be collected about the door, darting by the nest, wheeling in short circles near it, and uttering a call-note as they passed the aperture. It was as if the old martins had gone round to their friends and said, "For any sake do come and help to get these obstinate children out, or they will infallibly be left to starve."

The experiment succeeded, for next morning the young were gone.

In the case recorded by White, the male swift appears to have been guilty of desertion, but the more affectionate mother staid by her little ones till they were able to accompany her to more sunny climes.

"Our swifts, in general," says that delightful writer, "withdrew this year about the first day of August, all save one pair, which in two or three days was reduced to a single bird. The perseverance of this individual made me suspect that the strongest of motives, that of an attachment to her young, could alone occasion so late a stay. I watched, therefore, till the 24th of August, and then discovered that, under the eaves of the church, she attended upon two young which were fledged, and now put our their white chins from a crevice. These remained till the 27th, looking more alert every day, and seeming to long to be on the wing. After this day they were missing at once; nor could I ever observe them with their dam coursing round the church in the act of learning to fly, as the first broods evidently do. On the 31st I caused the eaves to be searched, but we found in the nest only two callow, dead, swifts, on which a second nest had been formed. The following remarks on this unusual incident are obvious. The first is, that though it may be disagreeable to swifts to remain beyond the beginning of August, yet that they can subsist longer is undeniable. The second is, that this uncommon event, as it was

owing to the loss of the first brood, so it corroborates my former remark, that swifts breed regularly but once."*

The purple martin of the United Estates (*Hirundo purpurea*), appears to be as great a favourite with our transatlantic brethren as the swallows and martins are with us.

"I never," says the celebrated Wilson, "met with more than one man who disliked the martins, and would not permit them to settle about his house. This was a penurious, close-fisted German, who hated them because, as he said 'they eat his peas.' I told him he must be mistaken, as I never knew an instance of martins eating peas; but he replied with coolness, that he had many times seen them himself 'blaying near the hife, and going schnip schnap,' by which it was understood that his bees had been the sufferers, and the charge could not be denied."

We believe that all our species are guiltless of such depredation, though Virgil in his fourth Georgic, distinctly charges the swallow with the act.

Before we take leave of these innocent and useful little birds, may we be pardoned for pleading in their favour against the wanton and cruel sport—if sport it must be called—of swallow-shooting? We say nothing of the sudden deprivation of a life of utility and enjoyment in the case of the bird shot, for the mere amusement of any mischievous coxcomb who is master of a gun—though *that* is something: it is to the agonizing and lingering death to which this abominable practice condemns the nestlings that we would point attention: and sure we are that there is no manly heart that will not shrink with horror from knowingly inflicting such suffering.

Another barbarous amusement—more practised, we are happy to say, in foreign countries than in our own—is angling for the *Hirundinidæ* from some lofty tower. The bait is a feather, at which the unsuspecting victim dashes to secure it as a prize for its nest. The tormentor—we cannot call him sportsman—every now and then drops small bits of white paper by way of attraction, as the punt-angler throws in his balls of clay and bran to collect the fish. The swallow not unfrequently takes the trout-angler's artificial fly, to the distress of the fisherman, and the destruction of the unfortunate bird.

The migratory *Merulidæ* which come to our coasts, are mostly winter visiters; but as the majority arrive at a period when they are mute as songsters, they do not claim more than a passing notice here. The rare White's thrush, of which the Earl of Malmsbury possesses so fine a specimen, was shot by his lordship

* Natural History of Selborne, vol. II.

in January, on his estate at Heron Court, near Christchurch.

The field-fare and redwing are regular and annual winter visitants. The nest of the former has indeed been found occasionally, but very rarely in England and Scotland. Norway, Sweden, Russia, and Siberia, are their summer quarters, and they remain throughout the year in Poland, Prussia, and Austria. Harsh as is the call-note of the field-fare, the song is soft and melodious, and the bird sings agreeably in confinement, to which it soon becomes reconciled. Bechstein gives it a very different character, for he says that its song is a mere harsh disagreeable warble.

The redwings have been seen and heard in Surrey, Essex, and Yorkshire, as late as May, by Mr. Blyth and Mr. Williamson; and in a cold backward season, they lingered in Hampshire, according to White, till June. Nests have occasionally been found in Middlesex and Surrey; but these were evidently accidental exceptions to the general rule. Its note, heard in Norway, is characterized by Mr. Hewitson as delightfully wild. Bechstein says its song is in no respect agreeable. Here, again, "who shall decide when, &c."

The ring-ouzel, which visits us in April, sings sweetly, according to Mr. Hewitson; clearly and powerfully, though the notes are few, according to Selby. This species is by no means widely dispersed; and the western and northern parts of our island seem to be preferred. Over Ireland they are generally distributed, according to Mr. Thompson. The nest, which is very like that of the common blackbird, is generally placed near the ground or on it, sheltered by some stone or bush, and sometimes on the sides of heathy banks without such shelter.

Here we may notice the elegant and beautiful rose-ouzel (*Pastor roseus*), of rare occurrence in these islands. The song of this species appears to be peculiar. A wounded bird shot from a flock by a sportsman near Meiningen, in Suabia, was soon healed and tamed by the kindness of M. von Wachter, the rector of Frickenhausen, and it began to sing. Bechstein relates that its warbling consisted at first of only a few harsh sounds, pretty well connected; but this in time became more clear and smooth. A connoisseur who had heard the bird without seeing it, thought he was listening to a concert of two starlings, two goldfinches, and perhaps a siskin; and when he saw that it was a single bird that made this music, he could not conceive how it all came from the same throat. One of these birds is now in the aviary of the Zoological Society in the Regent's Park.

The flute-like notes of the golden-oriole (*Oriolus galbula*), the Frenchman's *Père Loriot*, has been heard in our orchards, but

very rarely. Bechstein states that its call-note, so familiar to the Spaniard and Italian, and not unfamiliar to the Frenchman and German, may be well expressed by the words "ye puhlo." The translator of Bechstein's interesting book says, that the natural song is very like the awkward attempts of a country-boy with a bad musical ear to whistle the notes of a missel-thrush. But it is no bad mimic: for Bechstein saw two golden-orioles that were reared from the nest, one of which, independent of the natural song, whistled a minuet, and the other imitated a flourish of trumpets. One of his neighbours saw two at Berlin, both of which whistled different airs.

Such accomplishments indicate a very correct ear; and, indeed, that organ is so nice in the oriole, that when the sportsman endeavours to approach it, whistling its note, the slightest mistake or false intonation, warns the bird of the imposition, and it instantly flies away. The nest, which usually contains four or five white eggs, tinged with purple, and scantily spotted with ash-grey and claret, is generally *suspended* in a fork at the end of a bough; and the French have a saying purporting that the discovery of one bodes no good end to the finder.

But one regular visiter of the family *Anthidæ*, or pipit-larks, comes to these islands, and that is the tree-pipit (*Anthus arboreus*), so often confounded with the meadow-pipit (*Anthus pratensis*), which is a resident. The tree-pipit arrives late in April, and begins his pretty song on the top of a bush, or on a lofty branch of an elm. Presently up he goes, rising somewhat after the manner of a sky-lark, till he has ascended nearly as high again as the station from which he sprang; when, with outstretched wings and expanded tail, he makes a half-circle in his slow descent, singing all the while, till he arrives at the spot from which he started, or reaches the top of some neighbouring tree: and this he will constantly repeat for many times in succession, if not disturbed. Mr. Yarrell saw these musical evolutions most frequently during and after a warm May shower, and we have watched the bird with the same success at the same periods; and it *does* make the heart glad to see him, and rejoice in *his* gladness, as he carols away with the bright sun shining on the emerald leaves, from which the rain-drops hang like diamonds, whilst the glorious rainbow tells of peace and good will to all creatures. The nest, formed of moss, fibrous roots, and dry grass, lined with grass stems, and sparingly with hairs, is usually placed on the ground; but Mr. Neville Wood once found one on the lowest branch of a small thick bush. The four or five eggs vary in colour in different nests, but the most usual tints are purple-brown, or purple-red clouds or spots on a greyish white ground.

Richard's-pipit (*Anthus Ricardi*) was first noticed by Mr. Vigors, as an occasional visiter, and though the appearance of others here has been recorded, they can only be considered as stragglers.

Of the true larks (*Alaudidæ*), the only visiter, and that accidentally, is the shore-lark (*Alauda alpestris*). Its range from north to south is great. Captain Sir James Ross, R.N., records one shot near Felix Harbour, and Captain Phillip Parker King brought it from the Straits of Magellan; or, more correctly, Magalhaens. The bird is a sweet singer, and Audubon, who found it

> "— on the dismal shore
> Of cold and pitiless Labrador;
> Where under the moon, upon mounts of frost
> Full many a mariner's bones are tost,"

graphically describes its zealous parental affection.

"Although in the course of our previous rambles along the coast of Labrador," says that eloquent and accurate ornithologist, "and among the numberless islands that guard its shores, I had already seen this lark while breeding, never before that day did I so much enjoy its song, and never before I reached this singular spot had I to add to my pleasures that of finding its nest. Here I found the bird in the full perfection of plumage and song, and here I had an opportunity of studying its habits, which I will now endeavour to describe.

"The shore-lark breeds on the high and desolate tracts of Labrador, in the vicinity of the sea. The face of the country appears as if formed of one undulated expanse of granite, covered with mosses and lichens, varying in size and colour, some green, others as white as snow, and others again of every tint, and disposed in large patches or tufts. It is on the latter that this lark places her nest, which is disposed with so much care, while the moss so resembles the bird in hue, that unless you almost tread upon her as she sits, she seems to feel secure, and remains unmoved. Should you, however, approach so near, she flutters away, feigning lameness so cunningly, that none but one accustomed to the sight can refrain from pursuing her. The male immediately joins her in mimic wretchedness, uttering a note so soft and plaintive that it requires a strong stimulus to force the naturalist to rob the poor birds of their treasure.

"The nest around is imbedded in the moss to its edges, which is composed of fine grasses, circularly disposed, and forming a bed about two inches thick, with a lining of grouse feathers, and those of other birds. In the beginning of July the eggs are deposited. They are four or five in number, large, greyish, and

covered with numerous pale blue and brown spots. The young leave the nest before they are able to fly, and follow their parents over the moss, where they are fed about a week. They run nimbly, emit a soft *peep*, and squat closely at the first appearance of danger. If observed and pursued, they open their wings to aid them in their escape, and separating, make off with great celerity. On such occasions it is difficult to secure more than one of them, unless several persons be present, when each can pursue a bird. The parents all this time are following the enemy overhead, lamenting the danger to which their young are exposed. In several instances the old bird followed us almost to our boat, alighting occasionally on a projecting crag before us, and entreating us, as it were, to restore its offspring."

The harder billed or seed-eating singing-birds which pay us visits, mostly come among us late in the autumn, or in winter, as might be expected.

Of the *Emberizidæ*, or buntings, we have the Lapland bunting, the snow bunting, and the ortolan bunting. The Lapland bunting (*Plectrophanes Lapponica*), which is most lark-like both in its plumage and in the length of the hind-claw, has rarely indeed —but we believe as many as four different times,—been taken in this country. There was one in the cabinet of the late Mr. Vigors, bought at a market in London, and now in the museum of the Zoological Society. Mr. Yarrell has one which was caught near Brighton. Mr. Gould has recorded the capture of one a few miles north of London, and that in the Manchester Museum was taken near Preston, in Lancashire. The species is a native of the Arctic regions and the north of Europe, and Dr. Richardson notices it as breeding on the shores of the Arctic Sea. Though the instances above stated are the only occasions known to us on which this hyperborean bird has been captured in these islands, it is far from improbable that many visit us, especially in severe winters, or that several are taken in the lark nets without being detected by the captors and consumers: they have been occasionally caught with larks in the neighbourhood of Geneva. Bechstein says, "We should see them more frequently in Germany, if the birdcatchers who take them in their lark's net did not kill them both indifferently." The same author describes the song of the Lapland-bunting in captivity as very similar to the linnet's; and remarks that the female also warbles, but only in the bullfinch's style.

The snow bunting, or snow flake (*Plectrophanes glacialis*), the mountain bunting, and the tawny bunting, are all identical, the variation of the plumage at different times and seasons having been the cause which led authors to describe the bird in its various

dresses as belonging to a distinct species. It breeds in the northernmost of the American islands, and on all the shores of the continent, from Chesterfield Inlet to Behring's Straits, according to Dr. Richardson; and Captain Lyon found its nest of dry grass, carefully lined with a few feathers, and the hair of the deer, at Southampton Island, singularly placed.

"Near the large grave," says Captain Lyon, in his interesting description of an Esquimaux burying place, "was a third pile of stones, covering the body of a child, which was coiled up. A snow bunting had found its way through the loose stones which composed this little tomb, and its now forsaken, neatly-built nest was found placed on the neck of the child. As the snow-bunting has all the domestic virtues of our English redbreast; it has always been considered by us as the robin of these dreary wilds; and its lively chirp and fearless confidence have rendered it respected by the most hungry sportsmen. I could not on this occasion view its little nest, placed on the breast of infancy, without wishing that I possessed the power of poetically expressing the feelings it excited. Before going on board I placed boarding-pikes, men's and women's knives, and other articles which might be useful to the Esquimaux, on the huts and various piles of stones."

But if this familiar little bird was respected by the hungry mariners, luxury spares it not in the midst of plenty. In Austria they are caught and fattened with millet for the table of the epicure, according to Pennant. Mr. William Proctor, the curator of the Durham University Museum, informed Mr. Yarrell that he found the nests in Iceland with eggs from four to six in number. The male attended the female during incubation, and Mr. Proctor often saw him when he was coming from the nest rise up in the air and sing sweetly, with his wings and tail spread like the tree-pipit.* Mr. Macgillivray thinks it very probable that this pretty and varying species breeds on the higher Grampians, and perhaps in considerable numbers, but we are not aware of any instance of the nest having been found in our islands.

The translator of Bechstein's book remarks that the ortolan (*Emberiza hortulana*) is not found in Britain; but Mr. Yarrell, in his excellent work, has collected numerous evidences of its appearance here, some of the instances having occurred considerable time since.

The bird is a regular summer visiter to the middle and north of Europe, nor is it scarce in some of the German provinces, where it arrives towards the end of April or the beginning of May. Bechstein states that they are then met with in orchards, amongst brambles, or in groves, where they build, particularly if millet is cultivated in the neighbourhood. He adds, that during

* See "Yarrell's British Birds."

the harvest they frequent the fields in families, and leave after the oats are gathered in. It is therefore remarkable that we do not see more of them. The absence of its favourite millet may perhaps be the cause that the ortolan does not visit us in numbers; but we suspect that more come than are noticed, and that they are taken by inaccurate observers for some other species. For instance, the back of the ortolan is very similar to that of the cirl bunting,—so like indeed, that Mr. Yarrell's admirably executed *front view* of the bird was given, as he says, "to avoid repetition." Mr. Hoy informed Mr. Yarrell that he found the nests placed in slight hollows on the ground in corn-fields; they were rather more compact than the sky-lark's nest, but something similar. The eggs, from four to six in number, were bluish white, speckled and spotted with black.* This was on a part of the continent (Mr. Yarrell does not specify it) further north than that referred to by M. Vieillot, who states that it is most numerous in the southern parts of France, where its arrival is nearly contemporaneous with that of the swallow, and rather before that of the quail.

Neither the elegant form and colouring of the ortolan, nor its deep flute-like warbling, plead with success against the cravings of that all-devouring organ which has neither eyes nor ears. The happy birds are decoyed into a snare, and hurried from the fresh air and the blessed sun into a room lighted by lanterns, so that the prisoners can no longer distinguish day from night. Here they are abundantly supplied with oats, millet, and the crumb of white bread spiced. The loss of liberty seems to be forgotten by the devoted little gluttons in the more substantial enjoyments with which they are surrounded, and they apply themselves so vigorously and unweariedly to the good things set before them, that they become delicious lumps of high-flavoured fat. When they weigh about three ounces, their time is come; but such is their voracity, that if left to themselves they would die of suffocation from mere obesity. The *cuisinier des cuisiniers* describes the victim, and pronounces its eulogy with a pregnant brevity.

"L'ortolan est un petit oiseau, à-peu-près de la grosseur d'une mauviette. Il est grisâtre, et a le cou jaunâtre, aussi bien que le ventre. Il n'est jamais si bon qu'en août et en septembre. Il est très délicat et se digère aisément."

But the voice of the cuckoo, heard from yon lofty tree, loud and clear above the flood of melody poured from the hanging copse below, warns us how much of our sketch remains untouched. The finches and true warblers are still unnoticed, and we hope to present them to such of our readers as may take an interest in the subject.

June, 1841.

* "British Birds."

SINGING BIRDS—VISITERS.

"Sumer is icumen in,
Lhudè sing cuccu;
Groweth sed and bloweth med,
And springth the wdè nu.
Sing cuccu.
Awe beteth after lamb,
Lhouth after calvè cu,
Bulluc sterteth,
Buckè verteth,
Murie sing cuccu:
Cuccu, cuccu;
Wel singes thu cuccu,
Ne swik thu naver nu."

VERY ANCIENT BALLAD.

THIS cuckoo-song is considered by those best qualified to judge, to be the earliest ballad in the English language now extant. Its date is about the latter years of the reign of Henry III., and it affords a curious example of the alterations which our tongue has undergone since that time; whilst the descriptions, which breathe of rural sights and sounds, show that nature has suffered no change. For the benefit of those who are not Fellows of the Society of Antiquaries, we subjoin the translation, which does not pretend to preserve the rhythm.

Summer is come in,
Loud sings the cuckoo;
The seed grows and the mead is in flower,
And the wood springs (or shoots) now.
Sing cuckoo,
The ewe bleats after the lamb,
The cow lows after the calf,
The bullock starts,
The buck verts (goes to harbour in the fern),
Merrily sings the cuckoo;
Cuckoo, cuckoo;
Well singest thou cuckoo,
Mayest thou never cease.

But before we inquire into the life, character, and behaviour of the vocal vagrant in whose honour the antique rhymes of our

motto were composed, we must resume the thread which we dropped, and present, according to promise, the finches and true warblers.

The *Fringillidæ* or finches being hard-billed, and consequently seed-eating birds, arrive in autumn and winter mostly.

The mountain-finch or brambling, descending from the north, is spread over the whole European continent in winter, and there is a solitary instance of a bird having been shot so late as the 6th of May, near York; but no evidence of their breeding in these islands, either in a state of nature or captivity exists. They have been observed to feed greedily on the seeds of the knot-grass (*Polygonum aviculare*), and have been considered useful in arresting the dissemination of that noxious weed. The bill of the male in winter is yellowish-white, tipped with bluish black. The iris of the eye is brown, and the crown of the head, the cheeks, the ear-coverts, the nape, and the back, are dappled with brown and black. The feathers of the smaller wing-coverts are tipped with white, and as well as the scapulars, are of a rich fawn colour. The greater wing-coverts are deep black, tipped with fawn, and the quills are black. The rump and upper tail-coverts are white, slightly mottled with black, arising from the presence of a few feathers of the latter colour. The forked tail is black, edged with white, inclining to buff colour. The chin, the throat, and the upper part of the breast and sides are of the same rich fawn colour as the scapulars, smaller wing-coverts, and the broad edges of the tertials. The lower parts are white. The spring or nuptial dress varies from the winter plumage. In the season of hope and joy, the rusty brown tips of the head and neck feathers vanish, leaving the head and neck gear of a rich velvety black, and the bill becomes of a lead-blue hue throughout. In this state the bird remains till the autumnal moult again clothes in its winter covering.

M. Temminck describes the bird under the name of *Gros-bec d'Ardennes*, and it is probably the *Pinson d'Ardenne* of Belon, and the old French authors. The ancient quatrain gives it a firm and uncompromising character—

> "Pinson montain cest oyseau on appelle,
> Pource qu'es monts il vit communement.
> Son cœur est tel que navré griefriement,
> Ce nonobstant pinse, mord, et rebelle."

And the brambling is remarkable for its boldness and hardihood in confinement. Of the song, if it be gifted with any, nothing appears to be known: its call is a monotonous chirp.

As soon as the northern chills warn the siskin or aberdevine (*Fringilla spinus*), that it is time to quit the inhospitable regions

where winter has already begun its reign, the bird moves southward, and arrives in these islands in the autumn, abiding with us from September to April, often in small flocks, but generally in the company of linnets and redpoles, to feed on the seeds of the alder, the birch, and the larch. The siskin has but rarely been known to tarry in this country; but its nest has been noticed twice in furze, some three feet from the ground, near Coombe Wood, by Mr. Meyer, who informed Mr. Yarrell of the fact, of which there could be no doubt, for the eggs were taken in both cases, and placed under canaries which hatched them, and some of the young siskins were reared. Nor are these the only instances of the stay of the siskin during the breeding season. Sir William Jardine, Mr. Drew of Paisley, a correspondent in the sixth volume of "Loudon's Magazine of Natural History," and Mr. Gardiner, junior, of Dundee,* all record evidence of its producing young in this country, and the last-named gentleman bred and reared the species in confinement. He ascertained that the incubation lasted fourteen days; the young were fledged in fifteen days, and quitted the nest at the end of the third week.

The plumage of this pretty species is so well known, that it would be needless to describe it here. If any one is not acquainted with it, he will find admirable descriptions and figures in "Yarrell's British Birds," and "Gould's Birds of Europe." The song is very sweet, though not loud; and the Saxon stocking-weavers fancy that they detect in it the noise made by the loom, which makes the siskin a great favourite with them. Siskins are not bad bird-mimics, and will give imitations of the tits, the chaffinch, and the lark; but their talents are unequal to repeating a musical air. They are indefatigable singers and feeders, caring so little for the loss of their liberty that they will eat as soon as they are let out of the hand of the captor. Like the goldfinches, they are taught to draw up tiny buckets, and perform other tricks. and are always gay. When they are not eating, drinking, or singing, they are generally arranging their plumage, of which they take great care.

Though it may be

"Wrong for the greenfinch to flirt with the siskin,"

A *liaison* with a canary does not seem objectionable: for breeders pair the siskin with that bird, and thus obtain spotted mules, highly valued for their song, which is not too loud for a room.

The mealy redpole (*Linota canescens*), which is distinct from the lesser or common redpole (*Linota linaria*), is an arctic bird,

* Loudon's Magazine, vol. VIII.

with a very wide range over the North of America, Asia, and Europe, and is found in Japan. It is only an occasional visiter to this country, principally in winter, though it has been shot as late as May. Much cannot be said for its song; but the male mealy redpole in his spring dress, when his forehead and crown are blood-red, his throat and lore black, and the front of his neck, breast, and rump rosy, setting off the pure white of his underdress, is a very pretty bird. The seeds of forest-trees form the food of this species.

The mountain-linnet (*Linota montium*), though only a winter visiter in the south of England, breeds in the north of England and Scotland, as well as in the northern and western Scotch islands annually. It is the *Heather lintee* of Orkney and Shetland, and may be known from the common linnet and the redpoles by its longer tail, its reddish tawny throat, and the absence of red on the head or breast at any season, though the rump has a tinge of red in summer. The song is described by Mr. Selby as pleasing, though scarcely equal in compass to that of the common linnet.

The pine grosbeak (*Corythus enucleator*), can only be considered as an occasional visiter to any part of these islands. The species is especially abundant in the north of Europe and America, and occurs in Lapland, Norway, Russia, Siberia, Sweden, and the north of Germany. The pine forests are its favourite haunts, though it will eat the buds and seeds of most trees, and occasionally take an insect.

The male, when in full plumage, is a very handsome bird. The bill is dark brown, tinged on the lower mandible with dark red. The base of the upper mandible and the eyes are surrounded by a narrow dusky black band. The iris is hazel, and the whole of the head, the cheeks, the ear-coverts, and the hinder part of the neck, are of a fine vermillion. The greyish-black feathers of the back and scapulars are edged with red, and those of the rump and upper tail-coverts still more broadly, so that the colour of the head and neck is apparently continued. The wing-coverts and quills are greyish-black, and both greater and lesser wing-coverts have broad outer edges, and the tips white with a red tinge. All the quills have a narrow outer edging of white, the first six of the primaries being partially tinged with red. The slightly formed tail is uniform greyish-black. When in their proper position, the feathers of the chin, throat, breast, and sides make those parts appear of a fine vermillion red; but if they are lifted, they will be seen to be only edged with that colour and grey at the base like the feathers of the upper parts. The belly and under-tail coverts (the latter with a white edging), are French-grey, and the wings and tail be-

neath slate-grey. The legs and toes are blackish brown, and the claws are black. The total length of this fine species is eight inches.

The nest, built of small sticks and lined with feathers, is generally placed on a low branch of a tree not far from the ground, and contains four or five white eggs when the laying is complete. The song of the pine grosbeak is very melodious. Mr. Audubon states that he once "knew one of these sweet songsters, which in the evening, as soon as the lamp was lighted in the room where its cage was hung, would instantly tune its voice anew." The same fascinating author states that they are caught under snow-shoes, put up with a figure of four around the wood-cutters' camps in the State of Maine, and that their flesh is said to be good eating. A friend of his gives the following account of one in a state of domestication:

"I received," said his friend, "a male in splendid plumage, but so emaciated, that he seemed little else than a mass of feathers. By cautious feeding, however, he soon regained his flesh, and became so tame as to eat from my hand without the least appearance of fear. To reconcile him gradually to confinement, he was permitted to fly about my bed-room; and, upon rising in the morning, the first thing I did was to give him a small quantity of seed. But three mornings in succession I happened to lie rather later than usual, and each morning I was aroused by the bird fluttering upon my shoulder, and calling for his usual allowance. The third morning I allowed him to flutter about me some time before showing any symptom of being awake: he no sooner observed that his object was effected, than he retired to the window, and waited patiently until I arose."

Surely there is more than instinct in such conduct: in such actions have we not evidence of memory, association, and inference? Mr. Audubon's friend goes on to say that, as the spring approached, the bird used to whistle occasionally in the morning, and that his notes were exceedingly rich and full. The migratory instinct seems, however, to have prevailed in full force; for the narrator adds, that when the pine grosbeaks began to move to the north, the former familiarity of the bird entirely disappeared. The instance of the night singing here recorded, does not appear to stand alone; for Bechstein observes, that these birds (which are liked both on account of the ease with which they are tamed, and of their agreeable song), will sometimes sing in the night; and he adds that, in captivity, they keep their song throughout the year, whereas the wild birds only sing in the spring.

Though there was circumstantial evidence to show that the

common crossbill (*Loxia curvirostra*,) had bred in this country; and though it had been seen in some places throughout the year, Mr. Yarrell, whose industry in collecting facts is well known, was not able, when he published his interesting account of the bird, to find any instance in which the eggs or nestlings had been *taken*. Notwithstanding the case of their being observed during twelve months, the species, in the present state of our knowledge, can only be regarded in the light of an occasional visiter. It inhabits Lapland, Norway, Denmark, Sweden, Siberia, Russia, Poland, Germany, Switzerland, the Alps, and the Pyrenees in the Old World, and visits Spain and Genoa. These countries may be considered as its southern limit, generally speaking; but the Prince of Canino notices it as very rare and accidental near Rome; and adds, that it only appears in the hardest winters. In North America—for there now seems to be no doubt that the crossbill of that country is identical with the European bird,—Mr. Audubon found it more abundant in Maine, and the British provinces of New Brunswick and Nova Scotia, than anywhere else, and he met with it in the month of August in the great pine-forest of Pennsylvania. In the Old World its haunts are in such forests.

To this country they have generally come in large flocks. Mr. Yarrell observes, that there are some curious records of their appearance in the years 1254 and 1593. Of their visit in the last-named year, he gives the following account from an old MS., with a copy of which he was favoured by the Rev. L. B. Larking, of Ryarsh Vicarage, near Maidstone.

"The year 1593 was a greate and exceeding yeere of apples; and there were greate plenty of strang birds that shewed themselves at the tyme the apples were full rype, who fedde upon the kernels only of those apples, and haveinge a bill with one beake wrythinge over the other, which would presently bore a greate hole in the apple, and make way to the kernells; they were of the bignesse of a bullfinch, the henne right like the henne of the bullfinch in colour: the cocke a very glorious bird, in a manner al redde or yellowe on the brest, backe, and head. The oldest man living never heard or reade of any such like bird; and the thinge most to bee noted was, that it seemed they came out of some country not inhabited; for that they at the first would abide shooting at them, either with pellet, bowe, or other engine, and not remove till they were stricken downe; moreover, they would abide the throweing at them, in so much as diverse were stricken downe and killed with often throwing at them with apples. They came when the apples were rype, and went away when the apples were cleane fallen. They were very good meate"—as they are considered to this day, especially at Vienna, where Mr. Gould saw

multitudes of them exposed for sale for the table, in company indeed with swallows, martins, and other small birds, but looked upon as far superior to all the rest.

In the years 1821, 1836, 1837, and 1838, these crossbills visited England in considerable force. In 1791 many were taken at Bath. Mr. Yarrell remarks, that in 1828 they appeared in Westmorland; that in 1829 they were numerous in Yorkshire; and that they have been, he might also say, plentiful in various parts of England from the winter of 1835, to January 1839 (when he wrote his history of the species), probably induced, as he observes, to remain longer in this country now than formerly, by the greater abundance of fir plantations, to which they particularly resort for their principal food in winter. In April 1839, Mr. Charlesworth exhibited at the meeting of the Zoological Society, the nest, eggs and young, so long in vain sought for, from the neighbourhood of Farnham, in Surrey. Nests had before been seen near Dartford, in Kent, and near Saffron Walden; in the first case, on a pine-tree; in the last, in an apple-tree. No eggs, however, were laid in either case; but according to Mr. Joseph Clarke, of Saffron Walden, a pair some years ago completed a nest in the aviary at Audley-End, and the hen laid five eggs, but did not sit. The specimens exhibited by Mr. Charlesworth, were accompanied by notes relating to their discovery, by H. L. Long, Esq., who stated that the nest was lodged close to the central stem of a Scotch fir, about thirty inches below its highest point, at the base of the shoots of the year 1837: it was supported beneath by five or six ascending lateral branches of the tree, which so completely concealed it, that it could have scarcely been perceptible from the ground, and the retreat of the parent birds was only betrayed by their occasional visits. Mr. Yarrell observed that the eggs very nearly resembled those of the greenfinch, but that they were larger, and had a smaller portion of red-colouring, and this not confined to the larger end of the egg. It is not stated of what the nest was composed; but that built at Audley-End was of a loose texture, not unlike that of the greenfinch, "though not nearly so well, or so carefully built, and the eggs contained in it were not unlike those of that bird, but larger."

The plumage varies greatly at different periods. The nestling is dark green, with blackish longitudinal marks. The young birds in June and July have the head, neck, and all the under parts of the body streaked longitudinally with dusky brown, and then resemble the hen siskin; but the streaks in the male crossbills are much more distinct and bright than they are in the females. In September, the colour of the males is more uniform,

and the stripes more diffused. At the first autumnal moult, some change to red only, or yellow only, and others to red and yellow mixed.

The young hens at the same period become greenish-yellow on the crown of the head, and on the whole of the under parts, mixed with greyish-brown primrose-yellow tinged with green on the rump and upper tail-coverts, and of the same colour as the male on the wings, tail, and legs.

But the most curious part of the organization of the crossbills, is the structure of the beak, the mandibles of which cross each other at the extremity from right to left, or from left to right. Buffon, who is ever too ready to charge nature with a fault, speaks of this structure as a deformity. A more admirable instrument for the purpose it has to accomplish was never invented. In the nestlings the mandibles do not cross at all, because in that state their crossing would interfere with the sure reception of the food brought to them by their parents; their bills, therefore, are straight, and the under mandible shuts within the upper one. But as soon as the bird is arrived at an age when it must provide for itself, the mandibles cross to form a fitting tool for splitting apples, and even almonds, and for opening fir-cones. Mr. Townson kept some in captivity, and had an opportunity of witnessing how perfectly the disposition of the mandibles enables the bird to tear or wrench open what is presented to it. His pets would often come on the table whilst he was writing, and carry off his pencils, little chip-boxes in which he occasionally kept insects, and other similar objects, and tear them to pieces in a minute. Their mode of operation was first to peck a little hole, into which they inserted their bill, and then split or tore the object by a force exercised laterally. When he treated them with almonds in their shells, they got at the kernel in the same manner, namely, by first pecking a hole in the shell, and then enlarging it by wrenching off pieces by the lateral power. Mr. Yarrell mentions a pair kept by Mr. Morgan, which were impatient and restless under confinement, climbing over the wires of their cage with their beak and claws like parrots. One of their principal occupations was twisting out the ends of the wires of their prison—a feat which they performed with ease and dexterity. Then there was a short, flat-headed nail which confined some strong net-work, and was an object on which they especially delighted to try their strength. The male, who was the leader in every exploit, worked at this nail till he drew it out of the wood; not, however, without breaking off the point of his bill in the experiment. At last their

patron, wearied out by their incessant destruction of cages, was obliged to banish them. With this same formidable instrument they can pick up the smallest seeds, and shell hemp and similar grains, notwithstanding Buffon's rash assertion to the contrary. The beautiful disposition of the muscles by which the beak is worked, and the exquisitely adapted tongue, with its horny scoop for the reception of the dislodged seed, directed, are figured and described in a masterly manner by Mr. Yarrell in the "Zoological Journal," and in his "British Birds."

There is an odd superstition connected with these birds in Thuringia, which makes the wood-cutters very careful of the nests. The crossbills in captivity are subject to many diseases, such as weak eyes, swelled and ulcerated feet, &c., arising probably from the heat and accumulated vapours of the stove-heated rooms where they are kept. The Thuringian mountaineer believes that these wretched birds can take upon themselves any diseases to which he is subject, and always keeps some near him. He is satisfied that a bird whose upper mandible bends to the right, has the power of transferring colds and rheumatisms from man to itself; and if the mandible turns to the left, he is equally certain that the bird can render the same service to women. The crossbill is often attacked with epilepsy, and the Thuringians drink every day the water left by the bird as a specific against that disease.

The parrot crossbill (*Loxia pityopsittacus*) which is much larger than the common crossbill, and the white-winged bill (*Loxia falcirostra*) are both occasionally seen in this country.

Passing by those wagtails (*Motacillæ*) that visit this country—for they have no song beyond call-notes—we approach a family modest and even sombre in their attire, but in which the full power of bird-music is developed. The *Sylviadæ*, or warblers, afford examples of almost every degree of song, from the often-repeated double-note from which the chiffchaff takes its English name, to the rich and varied melody of the black-cap and the diapason of the nightingale.

The chiffchaff (*Sylvia hippolais*) is the smallest of the British visiters, and we have received one in a cover, together with a written half-sheet of paper franked by the penny stamp, which now affords such extensive communication on subjects of business or pleasure. It is a welcome little bird; for it is one of the earliest heralds of spring, generally arriving early in March: it has been heard in the very beginning of February. Its snug nest is generally made on or near the ground, sometimes in the ivy

that covers a wall, and is framed of dried grass, withered leaves, and moss on the outside, with an abundant warm lining of feathers, on which the six tiny white eggs scantily speckled with dark purplish red, are deposited. This sprightly species lingers long with us, and as he brings fine weather with him, so he does not depart till the middle of October, after which the winter generally comes rapidly upon us. Nay, so attached is the bird to his summer quarters, that Colonel Montagu saw it in the winters of 1806 and 1808 in the mild climate of Devonshire. In a wild state it is of infinite service in gardens, the neighbourhood of which it haunts, and is indefatigable in clearing the rose-trees and honeysuckles of the *aphides* which so often disappoint the hopes of the florist.

Confinement does not seem to affect it painfully; for one caught by Mr. Sweet took to feeding directly, and learned to drink milk out of a spoon. In three or four days it took a fly from his hand, and would wing its way round the room after the person who carried the spoonful of milk, of which beverage it was so fond, that it would perch on the hand that held the spoon, without manifesting the least fear. Every now and then it would rise to the ceiling and bring down a fly every time.

At last the confiding little bird became so very tame, that it would sit and sleep on Mr. Sweet's knee by the fire; and when the windows were open, it never attempted to fly out. Mr. Sweet then ventured to entice it out into the garden to see if it would return. It was with difficulty that the bird was induced to come out at the door by the lure of its favourite spoonful of milk; twice it returned into the room: the third time it flew into a little tree, from which it came and perched on Mr. Sweet's hand, and drank milk out of the spoon: from thence it flew to the ground on some chickweed, where it washed itself, and got into a holly-bush to dry.

Here the instinct of migration seems to have overcome all the domestic comforts which its kind-hearted master had provided for it, and to which it had become so attached; for, after the little bird had got among the holly-leaves, Mr. Sweet could see it no more, though he heard it call several times.

"I suppose," says he, "after it got quite dry, that it left the country directly, as I could never see or hear it afterwards; and it was then the end of November, when all the others had left for some time."*

The willow-warbler, willow-wren, or hay-bird (*Sylvia Tro-*

* "British Warblers."

chilus) generally arrives about the middle of April. The earliest arrival noted in "White's Calendar" is the 19th of March, and the latest is the 13th of April. Markwick's periods are the 30th of March and the 16th of May, and he records it as sitting on the 27th of May, and as last seen on the 23rd of October.

The nest which is built on the ground, often in the bank of a hedge skirting a wood, is a curious piece of architecture. It is oval or rounded, and made of moss and grass externally, so that it is with difficulty detected among the long grass and herbage in which it is generally concealed. It is lined with feathers, and the bird enters at the side. The six or seven eggs are generally white, plentifully but minutely speckled with pale red: but they have been found of a pure white.

Of the strong attachment of this lively bird to its nest a lady gives a very striking account in the "Field Naturalist."

She was walking, in the spring, through an orchard, when her attention was attracted by something on the ground in the form of a large ball composed of dried grass. She took it up and found that it was the domed nest of the willow-wren. Regretting her precipitation she restored it, as nearly as she could, to the place where it had been found, but with small hope that the owner would ever claim it again after such an attack. To her agreeable surprise, the little occupier was next day proceeding with its work. In a few days two eggs were laid, and the kind lady now hoped that her little *protégé* was safe from harm; when lo! an invading army of splay-footed ducks marched straight upon the nest (which was conspicuous, for the grass had not grown high enough to hide it), and with their broad shovels of bills spread the nest quite open, displaced the eggs, and left the neat and snug little domicile a complete ruin. The lady now despaired; but having driven away the waddling intruders, she did her best to restore the nest to something like its proper form, and placed the eggs inside. Her perseverance was rewarded; for that same day she was astonished to find an additional egg, and in about a week, four more. The bird sat, and ultimately brought out seven young ones. It almost seems as if this persecuted pair looked upon the lady as their guardian angel, and that, confident in her protection, under the most adverse circumstances, they were determined not to abandon their nest.

Mr. Yarrell speaks of the song of the willow-warbler as being soft and pleasing, sometimes given from a high tree, and occasionally while passing on the wing from place to place, but as

possessing but little variety. Mr. Sweet characterizes its musical powers as of a much higher order; and says, that as it is so fine a songster and almost continually in song, no little bird can be more desirable in a cage with other birds, its note, when in full song, being so loud and shrill, that its voice is plainly heard above the nightingale's, when both are in full power.

It is a great destroyer of aphides and other insects, and is too frequently shot on the supposition that it devours fruit, which it never eats. This useful and agreeable little warbler is courageous withal; and Mr. Sweet found that it soon became very familiar in captivity.

The wood-warbler (*Sylvia Sylvicola*) is a loud, though a simple songster, and, like the last species, sings from a lofty tree, and as it flies. The nest is externally like that of the willow-warbler, but it may be always distinguished by the entire absence of feathers within, fine grass and hairs invariably forming the lining of the domed nest of the wood-warbler. Like its congeners, it feeds on insects and their larvæ, but never on fruit. It comes late, seldom arriving till towards the end of April, sings during the greater part of the summer, and leaves us in September.

The blue-throated warbler, or blue-throated robin (*Cyanecula Suecica*), seldom deigns to visit us, though it is numerous as a summer visiter on the continent of Europe, where its beauty and voice do not save it from the cook; in Alsace, particularly, it is considered a great delicacy and numbers are immolated for the table.

It were to be wished that this elegant and pleasing songster would visit us more frequently: and as insects, earth-worms, and berries are its food, it seems singular that it does not favour us regularly with its company; for Russia and Siberia, as well as Spain, France, Holland, Germany, and Prussia know it well.

The redstarts now claim our attention, and the more common but more beautiful species (*Phœnicura ruticilla*, Gould; *Ruticilla phœnicura*, Bonap.) first presents itself. The second week in April, or thereabouts, generally brings it to our southern shores, and by the third week it has penetrated to the north of England. Its earliest appearance is noted by White on the 8th of that month, and its latest arrival on the 28th. Markwick records April the 5th as the earliest, states that it sings on the 25th of that month, and adds, that it was last seen on the 20th of September.

'Tis a pretty bird, too well known to every schoolboy with his

"shining morning face" to require description: and though the meadow, the orchard, and the garden, are not unfrequently chosen, its favourite haunts are ivied ruins. In such scenes its soft song has seemed to us sweetest, as it sat upon some broad stone among the wall-flowers, or on the top of the low tree that had sprung up in what was once a room, where men and women had lived, and children had played, pouring forth a lament over the grass-grown hearthstone. He is an affectionate bird; and while his mate is on the nest, he is constantly on the watch, sure to attract the eye and provoke danger by his smart plumage, and singing indefatigably to solace her. He is in truth "the bird of dawning;" for he has been heard as early as three o'clock in the morning, though he had not ceased his song till ten o'clock on the previous night.*

We are hardly justified in considering the black redstart (*Ruticilla Tithys*) as a visiter. Some five or six stragglers (one of them in Ireland) have been recorded in the autumn and winter.

The habits of the whinchat or furzechat (*Saxicola Rubetra*), are nearly allied to those of the resident stonechat, and the nest and eggs are almost similar; the eggs of the whinchat, indeed, are bluish green, minutely speckled with obscure reddish brown, whilst those of the stonechat are greyish blue, but speckled with the same colour. The arrival of the bird takes place about the middle of April, when it instantly repairs to its favourite furze-commons, where it may be seen with the stonechat; but in its musical powers, it far exceeds its companion.

Bechstein says, that its pleasing song very much resembles that of the goldfinch, but that what makes it more admired is, that it is not only heard during the day, but also in the evening, and sometimes during the night. According to him, the poor bird acutely feels the loss of liberty; for he tells us, that however gay it may appear when free, it becomes sad and melancholy within doors. Mr. Sweet, however, who seems thoroughly to have understood the treatment of the warblers in confinement, had one of these birds, (which exceeds the redstart, no mean proficient, in mimicry), whose spirits were no jot abated by being kept in the house.

"One that I bred from the nest by hand," says Mr. Sweet, "learnt the song of the white-throat, the redstart, willow-wren, nightingale, and also that of the missel-thrush which it frequently heard singing in a garden close by; of this latter

* Yarrell. "British Birds."

song it was so fond, that we were frequently obliged to put our favourite out of the room, not being able to bear its loud notes: it was certainly the best bird I ever kept of any kind, singing nearly the whole year through, and varying its song continually; the only fault was its strong voice. At last, our favourite was turned out of its cage by a mischievous servant on a cold winter's day when we were from home for about an hour, and we could not entice it back; it most probably died of the cold, or took its flight to a warmer region. I scarcely entertain any hopes of ever getting such another."

Worms, small snails, slugs, insects, and berries form the food of the whinchat, on which it becomes very fat about August, when the epicure is on the look out for them; for though smaller than the visiter that we must next notice, they equal it in delicacy and flavour.

He who is fond of dancing as well as music, should keep the wheatear (*Vitiflora Œnanthe*), which generally arrives here rather early in the spring. White notes its first appearance on the 18th of March, and its latest arrival as occurring on the 30th of that month; whilst Markwick saw it, one year, as early as the 13th, and has recorded its arrival in another year so late as the 23rd of May. Mr. Sweet states the general time of its coming to be about the middle of March, and that of its departure to be about the end of September, or the beginning of October, though he once saw a pair in Hyde Park as late as November.

"This," says Mr. Sweet in continuation, "is a very interesting bird in confinement, and is almost continually singing; it will also sing by night as well as by day, if there is a light in the room where it is kept; it has a very pleasant, variable, and agreeable song, different from all other birds, which in confinement it continues all the winter. When a pair of them are kept together in a large cage or aviary, it is very amusing to see them play with each other, flying up and down and spreading their long wings in a curious manner, dancing and singing at the same time. I have very little doubt but a young bird, brought up from the nest, might be taught to talk, as they are very imitative."

This pretty warbler is too generally known on our downs and sheep-walks, especially in the south of England, to demand a detailed account of its plumage. The rude nest is formed of bents, bits of shred, feathers, and any other materials that it can find. The four eggs are pale blue. The nest is generally sheltered by a stone or clod, and is often placed in stone-quarries, gravel-pits, or

chalk-pits. Sometimes it is so carefully hidden as to be beyond the reach of either eye or hand.

Mr. Knapp mentions a nest situated deep in the crevice of a stone-quarry, so well masked by projecting fragments that it was not to be observed till part of the rock was removed.

"Another hen-bird," says this interesting author and acute observer, "had descended through the interstices of some rather large, loose stones, as a mouse would have done, and then proceeded laterally to a hollow space in a bank, against which the stones were laid; and so deep had she penetrated, that many of the stones had to be removed before we could discover her treasure: as no appearance led to any suspicion of a nest, it would never have been detected but for our watchfulness."*

St. James's day, the 25th of July, is a dark day in the wheat-ear's calendar, for then the shepherds take the field against the devoted birds, beginning on that day to lay their traps cut in the turf and covered by a severed portion of the same, which are all in full play by the 1st of August. The slightest alarm, even the shadow of the passing clouds that

> "Imitate, on field and furrow,
> Life's checkered scene of joy and sorrow,"

will make the birds run under the shelter of the severed turf, and into one of the two twisted horse-hair nooses there set. The numbers captured annually are almost incredible. One shepherd has been known to take eighty-four dozen in a day, and Pennant has recorded that about 1840 dozen were annually snared at Eastbourne. The inns of all the Sussex coast are then redolent of these savoury victims, and, sooth to say, their fat and flavour are superlative.

That extraordinary ventriloquist, the grasshopper-warbler (*Locustella Rayi—Sylvia Locustella* of authors), visits us from the south about the middle of April, and quits this country in September.

"Nothing," says White in a letter to Pennant, dated 18th April, 1768, "can be more amusing than the whisper of this little bird, which seems to be close by, though at an hundred yards distance; and when close at your ear, is scarce any louder than when a great way off. Had I not been a little acquainted with insects, and known that the grasshopper kind is not yet hatched,

* "Journal of a Naturalist."

I should have hardly believed but that it had been a *locusta* whispering in the bushes. The country people laugh when you tell them that it is the note of a bird. It is a most artful creature, skulking in the thickest part of a bush; and will sing at a yard distance, provided it be concealed. I was obliged to get a person to go on the other side of the hedge, where it haunted; and then it would run, creeping like a mouse before us, for a hundred yards together, through the bottom of the thorns: yet it would not come into fair sight; but in a morning early, and when undisturbed, it sings on the top of a twig, gaping and shivering with its wings."

The greenish brown, and other shades of brown which tinge the plumage of this curious little bird are admirably adapted for concealment; and its nest, which is generally framed of coarse dried grass is as difficult to detect as itself, hidden as it generally is under the furze, thorns, or matted coarse grass, in some ditch or furrow. The fair white eggs, four or five, or even seven, in number, are carnation-freckled. In the height of summer, he chirps all night.

Descend we now to the sedgy side of yon clear but sluggish river, where the tall reeds make music as the wind sighs through them;—there sits the sedge-warbler (*Calamodyta Phragmitis—Sylvia Phragmitis* of the older authors) in his quiet brown coat, "the delicate polyglott" as White aptly calls him, singing incessantly night and day during the season of love and incubation, and imitating with clear but hurrying execution now a sparrow, now a swallow, and anon, a skylark. The night is clear and quiet, and, for a wonder, so is he; but just throw a clod into the willow-bush where he slumbers, and he starts from sleep trilling away as gaily as ever.* He came in April and will depart in September; and if you want to find his rather deep and hair-lined nest, framed of grass and bents, with its five or six pale yellowish brown eggs, mottled, and sometimes streaked with a darker tint, you should look for it near the ground at or near the bottom of some patch of thick herbage, for it rarely is supported by the reeds.

But we must be careful not to confound this polyglott with the merry reed-warbler (*Calamoherpe arundinacea—Sylvia arundinacea* of authors), for merry he is, notwithstanding his pale brown quakerly suit. If you cannot find its beautiful nest, turn to the elegant vignette in Yarrell's book;† and there you will see it supported on four reed-stems, formed of the seed-branches of the

* See White's "Selborne." † "British Birds."

reeds and very long grass coiled horizontally round with a little wool, including the four upright reeds in the substance. How deep it is ! but why ?—That the four or five greenish white eggs, with their ash-green and light-brown freckles may not be rolled out by the blasts before which the waving reeds bend. Colonel Montagu saw one of these birds retaining her seat on the nest when every gust forced it almost to the surface of the water.

The song is varied and pleasing, though hurried like that of the sedge-warbler, and is of better quality. Frequently have we heard it when plying the rod on the banks of the Colne. It sings by night as well as by day continually, and its loud music, often heard clearest in the evening twilight or grey dawn, resembles the notes and voices of several different birds.

Most of the true warblers sing concealed, and so, generally, does the garden-warbler (*Curruca hortensis—Sylvia hortensis*, of authors); though it sometimes quits its bower of thick foliage to pour forth its wild, but richly deep and mellow flute-like notes from the top branches of a tree. Its attire is modest, consisting of various shades of brown, the under plumage being of a whitish brown. It is a pea and fruit-eater, and in the cherry, and currant, and elder-berry season, its bill is always stained.

Towards the end of April or beginning of May, this exquisitely modulating warbler arrives, and retires southward in the autumn. The nest formed of grass-bents, and root-fibres, and a little wool and moss, is generally fixed in a low bush, or in rank herbage, and has been found in the ivy of a wall: the four or five greenish-white eggs are speckled, and streaked with ash-green and light brown.

This, little as it seems to be attended to in this country, is the true *becafico*, so earnestly sought on the continent for the tables of the dainty; but it must be remembered that the terms *becafico* and *bec-figue* are applied to any of the birds of this race that are fruit-eaters, when they are fat with their summer feed. Listen to the Professor who gave to the world the *Physiologie du Goût*.

" Parmi les petits oiseaux, le premier, par ordre d'excellence, est sans contredit le bec-figue. Il s'engraisse au moins autant que le rouge-gorge ou l'ortolan, *et la nature lui a donné en outre une amertume légère, et un parfum unique si exquis qu'ils engagent, remplissent et béatifient toutes les puissances dégustatrices. Si un bec-figue était de la grosseur d'un faisan, on le paierait certainement à l'égal d'un arpent de terre.*

" C'est grand dommage que cet oiseau privilégié se voit si

rarement à Paris : il en arrive à la vérité quelques-uns, mais il leur manque la graisse qui fait tout leur mérite ; et on peut dire qu'ils ressemblent à peine à ceux qu'on voit dans les départements de l'est ou du midi de la France."

This last is quite touching; and, after these tears, such as epicures only shed, we are driven to confess that Paris, like all created places and things, is not perfect.

The same cause probably, prevents the celebrity of the bird with us; for it evidently owes its plumpness and delicious sapidity to the figs, grapes, and other rich fruits of the south of Europe, and thither should the devotee make his pilgrimage.

With what emotion does the philosophical gastronomer above quoted relate the progress of such a pilgrim!

"J'ai entendu parler à Belley, dans ma jeunesse, du jésuite Fabi, né dans ce diocèse, et du goût particulier qu'il avait pour les bec-figues."

"'Dès qu'on en entendait crier, on disait : 'Voilà les bec-figues, le père Fabi est en route.' Effectivement, il ne manquait jamais d'arriver le 1er. Septembre avec un ami ; ils venaient s'en régaler pendant tout le passage ; chacun se faisait un plaisir de les inviter ; et ils partaient vers le 25.

"Tant qu'il fut en France, il ne manqua jamais de faire son voyage ornithophilique, et ne l'interrompit que quand il fut envoyé à Rome, où il mourut pénitencier en 1688."*

The common whitethroat (*Curruca cinerea*), whose grey coat is so well known to everybody, arrives in our thickets, hedge-rows, and grassy lanes, towards the end of April. He is a bold songster, and sings in right earnest. The heat of the day, when most other birds are hushed, does not silence him. On he trills, his little throat swelling again, only pausing to refresh himself with a few aphides from the rose-tree or honeysuckle, and a fly when he can get one. Mr. Sweet kept it in confinement, and says that nothing can be more amusing; it is full of antics, flying and frisking about, and erecting its crest, generally singing all the time. He kept one for eleven years, which, when he wrote, was in as good health and as full song as ever; and he declares that no song need be louder, sweeter, or more varied. He describes the little bird as being of the same temper as the nightingale, never suffering itself to be outdone. It would sing against a nightingale which Mr. Sweet had : when the nightingale raised its voice the white-

* The "Professeur" adds, "Le père Fabi (Honoré) était un homme d'un grand savoir; il a fait divers ouvrages de théologie et de physique, dans l'un desquels il cherche à prouver, qu'il avait découvert la circulation du sang avant, ou du moins aussitôt, qu'Harvey."

throat did the same, and tried its utmost to get above its great rival. Sometimes in the midst of its song it would run up to the nightingale, stretch out its neck, as if in defiance, and whistle as loud as it could, staring the nightingale in the face. If the nightingale attempted to peck it, away it started in an instant, flying round the aviary and singing all the time.

Mr. Slaney, who was well aware of the whitethroat's habit of singing in a sultry summer noon, gives the following instances of the effect of association.

"It is singular how some well-known sounds—even the song of this little bird—associated with remembrances of other scenes and times, will awaken long trains of thought in the minds of men. We remember a few years since, under circumstances of some depression, alone in a sultry day (when walking between the Hague and the village of Scheveling, on the bleak shores of Holland) hearing unexpectedly the song of this warbler of home, and the note brought back in a moment, clear as a mirror, to the mind's eye, cherished scenes across the water, and the forms and voices of those who gave them value: And once at Rome, amid the magnificent but melancholy ruins of the Colosseum, at noon, when no cloud shadowed the deep blue sky, when all other voices were silent, from the shrubs of that vast amphitheatre this English warbler suddenly poured forth his song, awakening a thousand recollections of the land of the free."*

There is a lesser whitethroat (*Curruca garrula*) often called the Babillard, that must not be passed without notice. He has some clacking notes in his song which have given him the name of *the little miller* among the Germans. Bechstein remarks that as these notes are heard more distinctly than the others, they are erroneously thought to be his whole song; but he adds that the rest, though certainly very weak, is so soft, so varied, so melodious, that it surpasses other warblers, and that to enjoy the beauty of its song you should have it alone in a room, and then no other singing bird is more agreeable. Both Mr. Sweet and Mr. Blyth speak highly of it. One that the former bred from the nest became so attached to the cage, that it could not be prevailed on to quit it for any length of time. When the cage-door was set open, it would generally come out quickly, and first alight on the floor, and then mount to the top of its cage, and thence fly to other cages in the room, and catch any flies within its reach. It would fly up and take those insects out of the hand, or drink milk out of

* "An Outline of the Smaller British Birds." By Robert A. Slaney, Esq., M.P.

a spoon with much relish, when invited. The least fright sent it to its own cage, first to the top, thence to the door, and then in. Mr. Sweet often hung it out at the window perched on the top of its cage, with the door open, but it would never attempt to go away. If a fly, indeed, passed near it, it would start off and catch it, and return with it to the top of the cage; and, after remaining there a considerable time, it would either return into the cage, or fly in at the window, and perch on the cages of other birds.

This familiar warbler arrives in all April and departs early in Autumn. The nest, framed externally of coarse bents, and lined with finer ones, root-fibres, and horsehair, is generally to be found in low bushes, or among brambles, and contains four or five white eggs, rather smaller than those of the common whitethroat, spotted and speckled, but not closely, with greyish ash or light brown.

The blackcap (*Curruca atricapilla*) is by common consent acknowledged to excel all the other warblers in the power, beauty, and execution of its notes, excepting the queen of song; and in quality of tone it certainly is, in our opinion, inferior to the nightingale. But the male is a most sweet singer; nor is the song of the female without attraction; and it is but fair to state that a very good judge* says that the blackcap rivals the nightingale, and that many persons even give it the preference.

"If," remarks Bechstein, "it has less volume, strength, and expression, it is more pure, easy, and flute-like in its tones, and its song is more varied, smooth, and delicate. It sings also for a much longer period, both when wild and in confinement, its song being hardly suspended throughout the year by day, and prolonged, like that of the nightingale, far into the night, though begun at dawn."

White gives it a high character for its full, sweet, deep, loud, and wild pipe. He adds that when it sits calmly and engages in song in earnest, it expresses a great variety of soft and gentle modulations, superior perhaps to those of any of our warblers, the nightingale excepted; and he characterises its music as having such a wild sweetness that it always brought to his mind the song of *Amiens*, in "As You Like it." With all this it is, in confinement, most affectionate to its mistress or master.

A hedge or white-thorn bush generally conceals the nest, which is framed of bents and dried herbage, lined with hair and root fibres: it is most frequently placed near the ground—that is, not more than two or three feet above it; but we have seen one in the garden attached to a house where we have spent many pleasant

* Bechstein.

days, suspended in a festoon of ivy which had shot out from the wall, and clung to a neighbouring young tree some seven feet from the ground.* The pale greenish-white eggs are speckled or mottled with ash and light-brown, and mostly have a few dark-brown spots and streaks.

The arrival of the blackcap takes place in general about April, and it returns southward in September. A later stay might prevent it from falling a victim to the spit; for it is one of those unfortunate birds that is doomed under the names of *Becafico* and *Macchetta,* "ogni qualvolta sieno grassi, ed in istato da far buona figura sulla mensa," as the Prince of Canino remarks.†

The very name of the bird calls up the remembrance of such a host of eulogists, that an expressive silence would perhaps be the best tribute to the powers of the nightingale; and tame indeed is that Saxon appellation to its Greek name, which would seem to imply that it is the very soul of song. It has been the theme for poetry in all ages, from the earliest lyre to the exquisitely tuned harp that has immortalized the

"Bower of roses by Bendemeer's stream."

Milton, all ear, has introduced it in his finest scenes, and it sings the nuptial song of our first parents in one of his most beautiful passages. Nor has the eloquence of prose been less warm in its praise. Only turn to the elegant fervour with which Pliny dwells on its miraculous power and execution;‡ or to the honest, pious, English admiration of Izaak Walton,‖ not to advert to a crowd of others, and what more can be said? We shall, in all humility, confine ourselves to a simple narrative, condensing as much of the history of the bird as our space will admit.

The nightingale (*Luscinia Philomela—Motacilla Luscinia,* Linn.) arrives in England somewhere about the middle of April. The males, as in the case of the blackcap, come several days before the females; they are very easily caught, and the lynx-eyed, quick-eared bird-catchers are immediately on the watch, so that they may secure them before the arrival of their mates; for it is a sad truth that if a male nightingale be taken after his song has won for him a partner, he hardly ever survives in a cage; he dies broken-hearted.

Plentiful as this warbler is in some localities, it is never found in others. Nightingales are numerous in the neighbourhood of London, and a Surrey bird is considered by connoisseurs to possess

* In Theodore Hook's garden at Fulham, *Eheu!*

† "Specchio Comparativo." ‡ Nat. Hist., x. 29.

‖ "Complete Angler," chap. 1.

a first-rate quality of voice. Sussex, Hampshire, Dorsetshire, Somersetshire, and the eastern part of Devonshire enjoy it, but Cornwall knows it not. Essex, Suffolk, Norfolk, and a great part of Yorkshire possess it, but no record of its arrival in Lancashire exists, though it has been heard as high up as Carlisle.

The Welshman never hears it in the principality, though a poetical licence has made it vocal there;* and yet we have heard it, and never sweeter, in the Valley of Nightingales, near Bristol. There is also a Welsh name for it—*Eos*. Neither Scotland nor Ireland are known to possess it. Patriotic attempts have been in vain made to introduce it into Wales and Scotland, but we never heard of any effort to naturalise it in Ireland; and, indeed, the countrymen of MOORE may well spare it, while they listen to the thrilling strains of their own impassioned bard.

Russia, Siberia, Sweden, Spain, Provence and Italy, North Africa, Egypt, Syria, Smyrna, and the Grecian Archipelago, are made musical by it; but neither the Channel islands, nor Brittany, are visited by the bird, though France generally owns it, for what says the old quatrain?

> "Le Rossignol, des oyseaux l'outrepasse
> Chante au prin-temps sans intermission,
> Et nuict et jour avec invention
> De chants divers, qui luy accroist la grace."

The general site of the nightingale's nest is on the ground; but we have found it in the fork of a low and young tree some three feet from the earth; and a very loosely formed nest it is, made of the dead leaves of the oak and hornbeam, with a few bents and bits of rushes, lined at the bottom with root-fibres—so loosely formed, indeed, that few have succeeded in taking up a nightingale's nest whole, without first binding it round with string or thread. Four or five olive-brown eggs are here deposited, and in this rude cradle the most brilliant of song-birds is nursed.

But, besides its natural vocal powers, the nightingale, it appears, can be taught to speak. Moschus, Statius, and Pliny, attest this, and the latter mentions, "luscinias Græco atque Latino sermone dociles" belonging to the young Cæsars.† We must confess that all the attempts to speak made by singing birds heard by us, have been imperfect; for though as in the case of the celebrated talking canary, you might with a little aid from the imagination make out "Pretty Queen" and other words, still the speech, like that of the witch in "Thalaba," was song, and the sound could hardly be termed more than an articulate whistle:—how different from the pronunciation of those anthropoglotts, the

* Dyer, Grongar Hill. † Nat. Hist. x. 42.

parrots, so well exemplified in Campbell's pathetic tale, *they* speak in earnest:

"The captain spoke in Spanish speech,
In Spanish speech the bird replied."

Like other biped performers, nightingales vary much in their powers of song. They have among them their Rubinis, Marios, Tamburinis, and Lablaches, and also their *Mopers*, that sing at intervals only, without connexion, and with long pauses—some minutes—between each strain. It is amusing to see when a man mounts his hobby—and happy is he who has one in his stable—how far it will carry him, aye, and merrily too. Thus Bechstein prints no less than twenty-four lines of words—some of them rare sesquipedalities—as expressive of the nightingale's song.

"Twenty-four different strains or couplets," says he, "may be reckoned in the song of a fine nightingale without including its delicate variations. This song is so articulate, so speaking, that it may be very well written. The following is a trial which I have made on that of a nightingale in my neighbourhood which passes for a very capital singer," and off the good Bechstein goes at score:

"Tioû, tioû, tioû, tioû,"
&c. &c. &c. &c.,

but we *must* introduce the reader to one or two of the words representing the strains:

"Zozozozozozozozozozozozozo, zirrhading.
Hezezezezezezezezezezezezezezezeze couar ho dze hoi.
Higaigaigaigaigaigaigai guiagaigaigai couior dzio dzio pi."

The British bird-fanciers have, also, a vocabulary of their own to express the same ideas.

The Honourable Daines Barrington, who kept a very fine nightingale for three years, attending particularly to its song, remarks that the tone is more mellow than that of any other bird, though at the same time by a proper exertion of its musical powers it can be excessively brilliant. When the bird sang its song round, Mr. Barrington observed sixteen different beginnings and closes, at the same time that the intermediate notes were commonly varied in their succession with such judgment as to produce a most pleasing variety. He also remarked that the bird would sometimes continue without a pause not less than twenty seconds; and that whenever respiration became necessary,

it was taken with as much judgment as by an opera-singer. He also observed that his nightingale began softly, like the ancient orators, reserving its breath to swell certain notes, which by this means had a most astonishing effect, eluding all verbal description. He took down indeed certain passages, which may be reduced to our musical intervals; but though, he remarks, one may thus form an idea of some of the notes used, yet it is impossible to give their comparative durations in point of musical time, upon which the whole effect must depend; and, indeed, he once procured a very capital flute-player to execute the notes which Kircher has engraved in his *Musurgia* as being used by the nightingale, when, from not being able to settle their respective lengths, it was hardly possible to observe any traces of the nightingale's song. He adds, that he thinks he may venture to say that a nightingale may be very clearly distinguished at more than half a mile, if the evening be calm, and he suspects that it would be heard further than a man.

The following is Mr. Barrington's table of the comparative merit of singing birds, making twenty the point of perfection:

	Mellowness of tone.	Sprightly notes.	Plaintive notes.	Compass.	Execution.
Nightingale	19	14	19	19	19
Skylark	4	19	4	18	18
Woodlark	18	4	17	12	8
Titlark	12	12	12	12	12
Linnet	12	16	12	16	18
Goldfinch	4	19	4	12	12
Chaffinch	4	12	4	8	8
Greenfinch	4	4	4	4	6
Hedge-sparrow	6	0	6	4	4
Aberdavine or siskin	2	4	0	4	4
Redpole	0	4	0	4	4
Thrush	4	4	4	4	4
Blackbird	4	4	0	2	2
Robin	6	16	12	12	12
Wren	0	12	0	4	4
Reed-sparrow	0	4	0	2	2
Blackcap, or the Norfolk mock nightingale	14	12	12	14	14

And here we conclude our imperfect sketch of the feathered songsters who enliven us with their wood-notes wild. In mute July, all is, comparatively speaking, hushed; and the concert

of birds may be said to be closed, till the returning year again brightens our fields,—

"Fields where the spring delays,
And fearlessly meets the ardour
Of the warm summer's gaze,
With but her tears to guard her.

"Islands so freshly fair,
That never hath bird come nigh them;
But from his course through air,
Hath been won downward by them."

THE CUCKOO.

"*Don Adriano de Armado.*—Holla! approach."

(*Enter all for the song*).

"This side is *Hiems*, winter.
This *Ver*, the spring: the one maintain'd by the owl,
The other by the cuckoo.
Ver begin."

LOVE'S LABOUR'S LOST.

AND a sweet rural song it is—a little *piquante* withal, as those who are old enough to have heard Mrs. Jordan's arch intonation of the word of fear in "As you Like it," whither it was transplanted for Rosalind's sake, will admit; albeit, Shakspere thought proper to quiz himself by making it the compilation of the most exquisite Don's "two learned men," irreverently termed by *Biron*, "the pedant" and "the hedge-priest." At the risk, however, of being classed with those worthies, we must begin at the beginning.

It has been doubted whether the cuckoo is the *Shacaph* or *Sacaph* of Holy Writ. (Lev. xi, 16.) The Septuagint has not the Greek name for the cuckoo (κόκκυξ). The Tigurine or Zurich version translates the word by *Cuculus*;* but the Vulgate renders it *Larum*,† and the term employed by the seventy would seem to sanction the latter word.

Barker's Bible (1615), generally known as the "Breeches Bible" (Gen. iii. 7.) gives the sixteenth verse of Leviticus thus:

"The ostrich also, and the night-crow, and the *seamew*, and the hauke after his kinde:"—but with the marginal note "or cuckowe" referring to "seamew."

Scheuchzer, in his *Physica Sacra* (1732), figures the cuckoo in his plate illustrative of the verse in question (Tab. 224), and "cuckoo" is the word in the edition now read in our churches.

This bird is not, it is true, mentioned by Hasselquist among

* Cuckoo. † Gull, or Sea-Mew.

those which he saw in the Holy Land, though he noticed the nightingale amid the willows of Jordan and the olive trees of Judea; but neither did he see the cuckoo in Egypt, whence Professor Temminck received it; and it is so widely spread, that there is no reason for supposing that it is excluded from Syria. It is well known in the Morea and the Grecian Archipelago, whence it departs for Africa with the turtle-dove, and is, in consequence, called *turtle-leader*. The turtle dove is named in Scripture again and again. The beautiful passage in the Song of Solomon will occur to every one—

"11. For lo! the winter is past, the rain is over and gone.

"12. The flowers appear on the earth; the time of the singing of birds is come, and the voice of the turtle is heard in our land.

"13. The fig-tree putteth forth her green figs, and the vines with the tender grape give a good smell. Arise, my love, my fair one, and come away!"

And Hasselquist saw the turtle (*Columba Turtur*) in the Holy Land.

Mr. Strickland noticed the cuckoo at Smyrna, and Mr. Dickson and Mr. Ross sent specimens of it from Erzeroum to the Zoological Society of London. It is spread over a great part of Asia, and has been found in Japan and Java.

The disputed word, it will be observed, stands between the night-crow or night-hawk, and the hawk, the owl being antecedent to the night-hawk in this catalogue of unclean birds. Now it was one of the old legends that the cuckoo, at a certain period, was turned into a hawk; and the evidence generally appears to be in favour of the version at present in use.

If we turn from sacred to profane story, we shall find that the cuckoo bore no common part in ancient fable. The king and father of Gods and men himself did not disdain to take the form of the bird when he was anxious to introduce himself to Juno. It is well known how compendiously Saturn provided for his family; and the future Queen of Heaven seems to have very nearly shared the fate of her brothers and sisters. She was, however, restored to the world by means of a potion given to her ogre of a papa, in order to make him give up the indigestible stone which his better-half had induced him to swallow instead of Jupiter. Poor blooming Juno was separated from the rest of the heavenly conclave, and wandering to Mount Thornax in Argolis, there remained in solitude. Jupiter, who was on the watch, raised the most pelting of pitiless storms, and, in the likeness of a cuckoo, flew all trembling and shivering from the bitter weather to Juno's lap for shelter. The kind-hearted goddess pitying the bird's condition, covered him with her robe. In an instant the bird was gone, and

the god resumed his shape. The sudden transformation, startling as it was, did not throw the prudent young lady off her guard, and they were afterwards married in due form.

But there is always somebody ready to give an ill-natured turn to a story: accordingly the gossip ran, that when the drenched bird flew to her for refuge, she shook it out of her *peplum*; but when the god stood confessed, she accepted him.

However this may have been, never was such a wedding as they had. Gods, man and womankind, beasts, and all creation attended at the solemnization of the nuptials, with one exception. Chelone plumply refused to come, and treated the whole affair with ridicule and contempt. Poor young lady—the world was in its infancy then, or she would have known better than to contemn the powerful, and would have escaped from figuring as a terrible example to posterity. Mercury just looked in, waved his caduceus over her, and down sank the shapely maiden,

> "As tall and as straight as the *popular Tree*,"

into a tortoise. This was not pleasant, but worse remained behind; for she was condemned to perpetual silence, and, in her new form, became the symbol of that unfeminine accomplishment. If anybody should be hardy enough to doubt all this, we would merely observe, that the mountain, after Jove's transformation, received the name of Coccyx or Coccygia, being no longer known as Thornax; and that the Argives especially worshipped the goddess, whose statue, seated on a throne, held a sceptre, upon the top of which a cuckoo was seated.

This elevation does not seem to have been lost sight of by the cuckoo, who began to think himself a very great bird; and in his pride of place, challenged the nightingale one fine April evening, to a trial of song. The difficulty was to find a good judge; but at last it was sagely remarked by an owl, that as the contention resolved itself into a question of sounds, the creature with the longest ears would best become the bench upon the occasion, and the animal appointed to keep down the growth of thistles took his seat accordingly. The cuckoo began and went on "cuckoo," "cuckoo," for half-an-hour, during which the judge was observed to prick up his long ears with a knowing air, to be equalled only by Harley when he enacts the translated *Bottom*.

As soon as his antagonist had finished, the nightingale poured forth

> "With fast, thick warble his delicious notes,
> As he were fearful that an April night
> Would be too short for him to utter forth
> His love-chant, and disburden his full soul
> Of all its music."

The judge had been nid-nid-nodding after the third or fourth strain, and when the song was ended, he was awakened by a hoot from the owl, who was somewhat scandalized by his dropping asleep, though she did not wonder at it, and had hardly been able to keep her own eyes open. He gravely observed, that the nightingale's voice was very loud, and that his song might be very fine for anything he knew; but he, for one, did not understand it, and he should be glad to hear who did. No answer being given beyond a hum of applause from his auditory, his worship decided in favour of the cuckoo. The nightingale, who thought this rather hard, lodged an appeal to Man, after a sneer or two from the president, and, to the astonishment of his absolute wisdom, his judgment was reversed. This was before the time of Midas, and the decision of the court below was, no doubt, the case relied upon by that Justice for his judgment in the celebrated suit of *Pan* against *Apollo*.

Nor did the cuckoo fail to figure in the ancient pharmacopœia. Pliny tells us,* that if it be wrapped in a hare-skin and applied to the patient, it will produce sleep, and Rodeletius notices its ashes as good against disorders of the stomach. A somewhat unsavoury decoction, into the ingredients of which we will not now enter, but which could be procured only from the cuckoo, was held to be a specific against the bite of a mad dog; and, according to the Roman zoologist, the very sound of its voice, when assisted by due ceremonies, produced a degree of domestic comfort, which, if the ancient Italians were as much subject to pulicial persecution as the moderns, must have been quite invaluable: that they were not spared the company of the indefatigable insect voltigeurs, any more than their descendants, is rendered highly probable by their lack of linen. If, when the bird was first heard, the auditor circumscribed his right-foot, and dug up the earth on which it rested, not a flea would be hatched wherever that earth was scattered.† Nor did the ancient kitchens disdain it. On the contrary, Aristotle states, that cuckoos are fattest and most highly-flavoured about the time of their laying;‡ and Pliny declares that no bird can compete with a young cuckoo, just able to fly, in the sweetness of its flesh.‖ Aldrovandus remarks, that the Italians still bring it to their tables; but that the Germans reject it with loathing as an unclean bird, on account of its habit of spitting, to the consideration of which charge we now proceed.

The country people and their children still give the name of "cuckoo-spittle" to the frothy nidus of *Tettigonia spumaria*, which

* Natural History, XXI. 15.
† Nat. Hist. XXX. 10.
‡ Hist. Anim, VI. 7.
‖ Ib. X. 9.

every one almost must have observed on plants in the spring. The worst that now comes of this fable now is, that when the children surround a plant so embossed, one older and more learned than the rest will clear away the froth to show the admiring minors the inmate, gravely assuring them that it will be a cuckoo! But, no very long time ago, this "cuckoo-spittle" had a very bad name, and constituted under the name of "witches-butter," one of the proofs, as the sages of the church and the law then pronounced such absurdities to be, that consigned numbers of women *and children* to the last penalties of the law at Mohra, in Sweden, in the year 1670.

These unfortunates were better known as "The Witches of Blockula," that being the place of the infernal meeting, as was also proved, to which the women and children aforesaid rode in the dead of night upon men, and when they came to Blockula the men were left reared against the wall asleep. But, besides this human conveyance, they bestrode posts and goats, the backs of the latter being elongated by an ingenious device for which we refer the curious to the trial. Nothing stopped them: they flew through chimneys and windows, and never broke a pane nor displaced a brick. Scenes were given in evidence as having occurred at their diabolical festival, such as cannot be written, but we *may* notice an infernal *coup d'état*, whereby the Prince of Darkness tested the fidelity of his followers by giving out that he was dead; whereat there was great lamentation. Some of these crack-brained women and children, worn out, no doubt, by the cruel and abominable means then put in force for the purpose, confessed among other things, that they had two spirits, one like a raven, the other like a cat, and that these spirits fetched them home butter, and cheese, and bacon, and all sorts of grain, and milk, and that sometimes these carriers filled themselves so full, that they disgorged part of the plunder by the way, which *rejectamenta* were found in several gardens where coleworts grew, and not far from the houses of those witches, and were called "butter of witches."

Dr. Hutchinson, after arguing that it is as plain as the day that such froth in meadows and gardens is not from witches and spirits disgorging, "but from grasshoppers and other little insects, that hatch their young ones sometimes in cottons, and sometimes in froths, &c." adds, "and when I see Swedish judges, and Dr. Horneck after them learn from the rabble to call it 'witches' butter,' and hang and burn their neighbours from such evidence, I cannot but stand amazed, and am sorry so good a man as Dr. Horneck was so far overseen, as to translate such a dangerous history for our people to learn from."

Of the Blockula witches, seventy were condemned, and most of them suffered death; moreover, as in every deep, there is a lower deep still, twenty children were whipped on the hands, thirty-six ran the gauntlet, and fifteen were executed! It is evident, from the earnestness with which Dr. Hutchinson argues against these monstrous indictments, that there was still (1720) much lurking belief in witchcraft in these kingdoms. Even now we often find evidence of its existence in the provinces, and whilst we write, the enlightened public of 1841 have been set a wondering at the haunted house at Clewer, which, for a time, bade fair to rival Mr. Mompesson's and his drummer, "The Dæmon of Tedworth."* We had, according to the newspapers, the neighbouring magistrates and the police, the chemists, and the sexton with his sounding iron, all bent on discovering the inexplicable knocking, which ceased on the departure of the tenants, who, of course, cannot be expected to pay any rent. Not that we ever for a moment supposed that any of these wise and skilful visiters regarded the knockings as supernatural; and if any whisperer have hinted that some of them *did* shake their heads ominously, we would comfort them by calling to their remembrance, that Dr. Johnson went to hear the Cock-lane ghost,† and lost his temper when the pertinacious Boswell pressed him upon the point; and that some of the clergy asked it questions, which it answered by determinate "Yes" or "No" knocks.

We now come to a less gloomy part of the subject, and proceed to inquire into the organization and natural habits of the cuckoo, not without the hope of interesting our readers in the history of a bird in which that almost universal and strongest affection in the warm-blooded *vertebrata*—the love for their offspring—seems nearly, if not entirely obliterated.

Aristotle refuted the fable that the cuckoo was, at a certain period, changed into a hawk, a tale that most probably had its origin in the striking change of plumage that takes place. Few species of birds differ more from each other than does a young cuckoo from the full-grown bird, which bears no small resemblance to the merlin with "his pinion of glossy blue." The Greek zoologist also noticed the fact that the female lays her eggs in the nests of other birds. Pliny repeats both these observations, and dilates upon the complacency with which the foster-parent regards the well-fed bulk of her supposititious nestling, suffering him to rob his wretched comates of their food, and them to be destroyed in her sight, till at last, when her overgrown pet is ready to fly, he finishes by making a meal of his nurse. After

* 1661. † 1762.

this feat, he, as we have seen, becomes in his turn excellent eating, according to Pliny. In allusion to this mode of showing his gratitude, the *Fool* in "Lear" bitterly says,

> "The hedge-sparrow fed the cuckoo so long,
> That it had its head bit off by its young."

And hence the French proverb, *Ingrat comme un coucou.*

The statement of Aristotle, that the κόκκυξ builds its nest in buildings and rocks, cannot be disputed (*Hist. Anim.* vi. 1.); but it is evident that the bird mentioned in this part of his great work, was not the common cuckoo; for he distinctly says (ix. 39,) that the female cuckoo makes no nest, but, as we have reminded the reader in the preceding page, deposits her eggs in the nests of other birds (four of which he names), and leaves the bird in whose nest her egg is deposited, to hatch it. Nor is it at all improbable that the first passage here alluded to, was in great measure the origin of the doubt imported into the natural history of the bird at different modern periods. Thus Dr. Brookes writes:

"This bird is remarkable for laying its eggs in the nests of other birds, such as hedge-sparrows, finches, and the like, for it has no nest of its own. It first devours the eggs it finds in the nests, and then begins to lay its own in their room, where they are hatched by the silly bird with a great deal of care, and it takes the young cuckoo for its own offspring. However, though this has been asserted by many naturalists, yet from our own experience we can affirm, that this bird hatches its own young, and that its nest, like that of other birds, has something peculiar, being made larger than that of a blackbird on the outer side, of the same materials, namely, thorns, long grass, and clay; and on the inside it is covered warmly with wool and short hair from cows and other animals."*

In our own time, this story of the cuckoo making its own nest has been revived, and sanctioned by no less an authority than Dr. Fleming. But there can be little or no doubt, as Montagu has shown, that the evidence on which this nest-making and feeding the young is asserted, is not to be trusted. The birds taken for cuckoos were probably nightjars, or, as they are commonly called, goatsuckers (*Caprimulgus Europæus*).

Taking it then for granted that the female cuckoo does not make any nest, the next point of inquiry is what nests she selects for the purpose of continuing the species. Aristotle names those of pigeons or doves, and of certain small birds—probably one of

* A Complete System of Ornithology, or a Natural History of Birds, 8vo. London, 1776.

the warblers, the meadow-pipit, or perhaps the skylark, and the greenfinch. Pliny says, that the nests of doves are principally selected. In this country the eggs have been found in the nests of the hedge-sparrow or hedge-warbler, the redbreast, the whitethroat, the redstart, the willow-warbler, the pied-wagtail, the meadow-pipit, the skylark, the yellow-bunting, the chaffinch, the greenfinch, the linnet, and the blackbird. On the continent of Europe, the egg has been also found in the nests of the red-backed shrike and of the thrush: in this country a pair of red-backed shrikes have been seen feeding a young cuckoo. With us, the nests usually selected are those of the hedge-sparrow, the pied-wagtail, and the meadow-pipit.

The great disproportion between the little birds last named, and the cuckoo, will at once strike the uninitiated; but the egg of the latter, which is of a pale reddish grey-colour is disproportionately small. Dr. Jenner found that the largest of two cuckoos' eggs weighed fifty-five grains, whilst the smallest weighed only forty-three grains; and Mr. Yarrell states, that the largest of four specimens in his collection only measures eleven lines and a half in length, and eight lines and a half in breadth, the exact size of that of the skylark, and yet, as he remarks, the comparative size of the birds is as four to one. Now, if this egg of the cuckoo had been proportioned to the size of the bird, the difference between it and the foster-mother's own egg, must have been obvious to the touch as well as the sight: as it is, the foster-mother is not startled by the imposition. As soon as the young cuckoo is hatched, the parental affection is awakened towards it, and blinds the poor dupes that watch over it to every thing but the necessity of providing for their enormous nestling, who takes special care that he shall be the only object of their στοργή.

The female cuckoo lays at long intervals; six or eight days elapse between the times of deposit, and Schlegel thinks that the particular nature and effect of its food produces an enlargement of the stomach, which appears to influence the development of the eggs.

No difficulty would occur to prevent the direct deposit of the egg in some of the nests above mentioned; but it has been stated that the egg of a cuckoo has been found in the domed nest of a wren, and in a wagtail's nest under the eaves of a cottage: in these cases the cuckoo could not have sat upon the nest to deposit the egg, and the inference is, that when the nest is of such a nature or so situated, that it would not be possible for the cuckoo to sit upon it, she drops the egg in from her bill. Le Vaillant had strong evidence to show that one of the African cuckoos *did* carry her egg in her bill, in order to drop it into nests having a narrow

side entrance. That some birds *do* carry their eggs in their mouths, we have the testimony of Mr. Audubon, who says, that when the American goat-sucker discovers that its eggs have been touched, it appears extremely dejected, and, after a few low notes and some gesticulations, all indicative of great distress, it takes an egg into its large mouth, and its mate does the same, when they will fly off together skimming closely over the ground.

The egg, however deposited, is, from the moment of its deposit, abandoned by the cuckoo, and, after a fortnight's incubation, it is hatched. Very shortly after its birth, the young cuckoo is the sole tenant of the nest. This was formerly accounted for in various ways. Some declared that the foster-parents were so enamoured of their Pantagruel of a nestling, that they killed their own offspring, and gave them to the young giant to eat. Others again asserted, that the old cuckoo took advantage of the nurse's absence to gobble up the real Simon Pures, and so leave room for the intruder. Others again, as we have above noticed, believed that as the young cuckoo gained strength, it swallowed the nestlings, and at last the nurse herself.

The truth is, that the eggs and true nestlings are, immediately after its birth, got rid of by the young cuckoo, which has a depression upon the middle of its broad-back to assist it in the summary ejectment of its fellow-lodgers. Insinuating itself under the egg or nestling, the intruder gets it upon the hollow of its back, and, if left to itself, never rests till it has shouldered and jerked it out of the nest. Dr. Jenner, Colonel Montagu, and many other accurate observers, have placed this wonderful and early effort of instinct beyond doubt. In one case, two young hedge-sparrows and a young cuckoo were hatched on the same morning. In the evening the young cuckoo was sole tenant. Colonel Montagu took the nest and bird, when the latter was five days old, to his house, and put a young swallow, by way of experiment, into the nest with it. The cuckoo frequently threw the young swallow out for four or five days after. Sometimes, indeed, the cuckoo failed after much struggling, for the swallow was strong and nearly full-feathered; but after a short rest to recover its fatigue, the cuckoo renewed its efforts, and seemed continually restless till it succeeded. At the end of the fifth day this disposition ceased, and the young cuckoo permitted the swallow to remain unmolested in the nest. It is worthy of note, that when the cuckoo is about twelve days old, the hollow on the back is filled up, and its shape is that of nestlings in general.

Sometimes two eggs of the cuckoo are deposited in the same nest, most probably by different individuals. If these are hatched,

then comes the tug of war. Dr. Jenner relates, that on the 27th of June, 1787, two cuckoos and a hedge-sparrow were hatched in the same nest; one hedge-sparrow's egg remained unhatched. In a few hours after, a severe contest began between the cuckoos for the possession of the nest. The combatants appeared alternately to have the advantage. Each carried the other several times nearly to the top of the nest, and then sank down again under the pressure of his burden. At length, after several struggles, the strongest cuckoo prevailed, turned out the other, the young hedge-sparrow, and the unhatched egg, remained sole possessor of the nest, and was brought up by the old hedge-sparrows.

The cuckoo is thus the cause of keeping down the population of the insectivorous birds, and those whose nests are made the places of deposit. Mr. Rennie calculates that it annually destroys about 3,500,000 of their eggs.

It may be readily conceived what a busy time of it the poor dupes of foster-parents have in providing for the feathered Dando that they have unconsciously brought into existence. Cases are on record where their compassionate neighbours are said to have assisted them in providing for the overwhelming demands of their big changeling.

Two instances are given in the *Gentleman's Magazine* for 1806 of young cuckoos having been occasionally fed by large numbers of birds of the same species as their foster-parents. One of these nestlings, was, it is stated, supplied with nourishment by upwards of twenty titlarks, and the other was waited upon by forty-eight wagtails. Colonel Montagu and Mr. Eaton of York, doubt the accuracy of these reports; but Mr. Blackwall sees no occasion to call the principal fact in question. The latter zoologist observes that the young cuckoo is particularly clamorous when stimulated by hunger; and he finds a reason for the benevolence of the contributing birds in their being unable to hear the distressed and distressing cry for food, without being moved to succour the hungry nestling. He gives several instances where birds of a different species have brought food to deserted nestlings; and he therefore is of opinion that the article in the *Gentleman's Magazine* is perfectly correct in asserting that young cuckoos are occasionally fed by a more than ordinary number of birds; but that it is erroneous to suppose that these numerous purveyors are invariably of the same species as the foster-parents of the cuckoos.

But, according to observations made by Mr. J. E. Gray of the British Museum, natural affection would not appear to be entirely extinguished in the breast of the cuckoo. He states that she

does not uniformly desert her offspring to the extent that has been supposed; but, on the contrary, that she continues in the precincts where the eggs are deposited, and in all probability takes the young under her protection when they are sufficiently fledged to leave the nest. This is as if the mother had put out her child to nurse, but yet continued to watch over it.

Strange tales have been told relative to the food of the cuckoo. The nursery song says—

"The cuckoo is a fine bird,
He sings as he flies,
He brings us good tidings,
He tells us no lies.

He sucks little birds' eggs
To make his voice clear,
And when he sings 'cuckoo'
The summer is near."

Dr. Brookes sets himself seriously to refute this story of the eggs, and says, truly enough, that those cuckoos which have been opened, have had caterpillars and other insects found in their crops. Selby remarks that it is an opinion very commonly entertained, that this bird sucks the other eggs in the nest where it deposits its own; but that there appears to be no reason for supposing this to be the case, and that the belief has without doubt arisen from the fact of the young cuckoo being so often found sole tenant, after the expulsion of its co-partners.

Mr. Hoy, Mr. Salmon, and other observers of reputation, however, testify that the adult cuckoo occasionally destroys one or more of the eggs that she finds in the nest where she deposits her own. Still there can be no doubt that the cuckoo feeds principally, if not entirely, upon insects. White saw one hawking for dragon-flies (*Libellulæ*) over a pond, and the hairy *larvæ* of some of the lepidopterous insects are especial favourites.

It was formerly supposed that the hairs found on the inner surface of the stomach of this bird were of spontaneous growth; and, indeed, very lately, Mr. Thompson was disposed so to consider them: but Professor Owen found that these supposed gastric hairs presented under the microscope the complex structure characteristic of those of the larva of the tiger-moth (*Arctia Caja*); and proved to the satisfaction of Mr. Thompson that they were altogether borrowed from that insect, the only species taken from the stomach of the bird in various specimens from different parts of the country, examined by Mr. Thompson in the months of May and June, 1833. In the museum of the Royal College of Surgeons in London (No. 534. *Physiological Series*)

are balls composed of fine hairs, from the stomach of a cuckoo; and John Hunter, the founder of that noble collection, observes, in his *Animal Œconomy*, that the cuckoo in certain seasons lives on caterpillars, some of which have hairs of a considerable length on their bodies, and that the ends of these hairs are found sticking in the horny coat of the stomach or gizzard, while the hairs themselves are laid flat on its surface; not in every direction, which would be the case if there was no regular motion, but all one way, arising from a central point placed in the middle of the horny part, the appearance on both sides of the gizzard evidently corresponding.

The gallant chanticleer has been termed the shepherd's clock; and the cuckoo may be called the husbandman's timekeeper. Hesiod (*Works and Days*, 484), tells us that when the song of the latter was heard amid the oak-leaves, it was late for ploughing, though there was still good time, if it rained incessantly three days and three nights; and woe to the ancient Italian vine-dresser whom the voice of the cuckoo surprised before he had finished pruning his vine. Hence the irritating mockery with which the wayfarer, loudly imitating the notes of the bird, assailed the husbandman as he cultivated his vineyard, taunting him with his sloth.* In this country the cuckoo arrives in April. The earliest time noted by White is the 7th of that month, and the latest the 26th. Markwick's periods of arrival are April 15th, and May 3rd, and he records the bird as last heard on the 28th of June; indeed it has been observed that there is a remarkable coincidence between the time of the bird's song and the season of the continuance of the mackarel in full roe; that is, from about the middle of April to the latter end of June. The notes of the male have, however, been heard as late as the end of July. As the season advances, the clearness of his two distinct notes is gradually lost, till at last they are curtailed to an indistinct "gowk" whence its provincial name. Aristotle has noticed the failure of its song, and its broken notes before its departure.†

The male arrives here before the female: the voice of the latter is totally unlike that of the male, and somewhat resembles the voice of the gallinules and dabchicks. This attracts the other sex, and she may often be seen attended by one or two beaux, crying most vehemently as they follow in her train, and occasionally fighting with each other. The males seem to have favourite trees where they repeat their song, for Pennant caught in a trap, which he placed on a tree frequented by them, no fewer than five

* Hor. Sat. I. 7. Pliny. Nat. Hist. XVIII. 26.
† Hist. Anim. IX. 49.

of that sex in one season. As the cuckoo flies along he is often mobbed by the little birds.

"Le coqu est de tous oyseaux hay,
Parce qu'au nid des autres il va pondre,
Par cest oyseau fault les amans semondre,
Qu'aucun mary par eux ne soit trahy."

The history of his advent to this country, and of his departure from it, is comprised in these old English lines, of which there are different versions:

In April
Come he will,
In flow'ry May
He sings all day,
In leafy June
He changes his tune,
In bright July
He's ready to fly,
In August
Go he must."

The young cuckoos do not leave us till September. Some few late-hatched birds may be found during winter in hollow trees, as observed by Agricöla in his book, *De Animantibus Subterraneis*, or in the thickest tangles of a furze-bush, as asserted by others; yet these are but exceptions, for young cuckoos have rarely been kept alive till the ensuing spring. Indeed, there can be no doubt as to the fact of their migration: Mr. Swainson saw them arrive at Sicily and Naples in the spring, and thence direct their flight northward. One brought to Colonel Montagu in July, just as it could fly, was by great care kept alive till the 14th of December. This bird was very much afraid of strangers, but suffered itself to be handled quietly by a young lady who had fed it and been its kind benefactress, and it appeared to be comforted, poor thing, by the warmth of her hand to its feet.

Mr. Von Schauroth gives the species a very unamiable character in captivity. He reared many, and tried to domesticate one in particular, but it was never entirely tamed. Buffon, on the contrary, states that he was acquainted with several persons who had reared and tamed them, though he lost all he tried to rear between autumn and winter. He relates that one knew his master, came at his call, followed him in the chase, perched on his gun, and, if it found a cherry-tree in its way, would fly to it, and not return till it had eaten plentifully. Sometimes it would not return to its master for the whole day, but would follow him from tree to tree. The account of the relish with which this cuckoo regaled upon the cherries is curious, with

reference to the old rhyme employed by nurses to teach a child its first words,

"Cuckoo,
Cherry-tree;
Lay an egg,
Bring it me;"

and indeed few of these nursery jingles are without some foundation. But, although the cuckoo may occasionally solace its palate with cherries, insects certainly form the principal nourishment of the species, as we have before observed.

And now farewell to our feathered vocal visiters

"Till green leaves come again."

August, 1841.

OWLS.

" Now the wasted brands do glow,
Whilst the scritch-owl, scritching loud,
Puts the wretch that lies in woe,
In remembrance of a shroud.
Now it is the time of night,
That the graves all gaping wide,
Every one lets forth his sprite,
In the church-way paths to glide."

A MIDSUMMER NIGHT'S DREAM.

The lurking belief in the existence of supernatural agency has been apparent in every age of which we have any record. Men, whether civilized or uncivilized, seem always to have been possessed with a notion of spiritual manifestation; and this notion combined with the longing after immortality characteristic of human nature, has either taken the holy form of sound religion—without whose aid no laws merely human could keep that strange piece of work, man, within those bounds beyond which all would become licence and confusion—or has degenerated into the

" Somnia, terrores magicos, miracula, sagas,
Nocturnos lemures, portentaque Thessala—"

that in some shape or other have darkened the page of history with the terrors and the cruelties—for none are more apt to be cruel than frightened people—of superstition.

When once this same evil principle has taken root in the mind, its bitter fruit is soon seen in the horrors with which the most ordinary accidents and the most common things, animate and inanimate, become invested. It is not uninteresting to observe how a harmless bird or innocent quadruped, when looked at through the superstitious medium, is magnified into a being of high importance, capable, in the opinion of the soul-stricken spectator, of working weal or woe on his destinies; nor is it unamusing to trace down these fantasies in connexion with the natural history of such charmed creatures,—though it by no means follows that what amuses the writer must be pleasant to the reader.

There are few animals that have been more suspiciously regarded than owls. Their retired habits, the desolate places that are their favourite haunts, their hollow hootings, fearful shriekings, serpent-like hissings, and coffin-maker-like snappings, have helped to give them a bad eminence, more than overbalancing all the glory that Minerva and her own Athens could shed around them.

In the sacred volume, or rather in our translations of it, we find the owl again and again associated with desolation. The thirty-fourth chapter of Isaiah, in the version now read in our churches, teems with instances:

"11. But the cormorant and the bittern shall possess it; the owl also and the raven shall dwell in it: and he shall stretch out upon it the line of confusion, and the stones of emptiness.

"13. And thorns shall come up in her palaces, nettles and brambles in the fortresses thereof: and it shall be an habitation of dragons, and a court of owls.

"14. The wild beasts of the desert shall also meet with the wild beasts of the island, and the satyr shall cry to his fellow; the screech-owl also shall rest there, and find for herself a place of rest.

"15. There shall the great owl make her nest, and lay, and hatch, and gather under her shadow: there shall the vultures also be gathered, every one with her mate."

But there are not wanting those who do not admit any owl at all into any of these verses, except the fourteenth, where the original word rendered in our bibles "Screech Owl," is *Lilith*; and this, indeed, seems to be the better opinion.

In Barker's bible—"Translated according to the Hebrew and Greeke, and conferred with the best translations in divers languages: with most profitable annotations upon all the hard places, &c. &c. Imprinted at London by Robert Barker, Printer to the King's most excellent Maiestie, 1615," the word "owl" does not occur at all in the thirteenth verse of this chapter, where it is signified "that Idumea should be an horrible desolation and barren wildernesse."

"11. But the pelicane and the hedgehog shall possesse it, and the great owle and the raven shall dwell in it, and hee shall stretch out upon it the line of vanitie, and the stones of emptinesse.

"13. And it shall bring foorth thornes in the palaces thereof, nettles and thistles in the strong holdes thereof, and it shall be an habitation for dragons and a court for ostriches.

"14. There shall meete also Ziim and Jim, and the Satyre shall cry to his fellow, and the shrich-owle shall rest there, and shall finde for her selfe a quiet dwelling.

"15. There shall the owle make her nest, and lay, and hatch,

and gather them under her shadowe: there shall the vultures also bee gathered, every one with her mate."

In the Septuagint, no word that can be fairly translated "owl" is to be found in any of these verses. The Zurich version has *Bubo* in the eleventh verse only; for even the *Lilith* of the fourteenth is translated *Lamiam* (the *Nacht-frau*, or night-hag), and in the Vulgate we look in vain for the owl in this chapter. Demons and onocentaurs, and shrieking spirits, satyrs, and vultures, with kites and beavers, hedgehogs and pelicans, are the principal personages that haunt the dismal scene in these versions. In Scheuchzer's* plate illustrative of the verses quoted, there are no less than five owls in the fore and middle grounds; and dragons are flying about the ruins.

If the saying, "You may know a man by the company he keeps," be applicable to owls, the society in which they are found in the verses and plate above noticed is not calculated to enable them to give a very good account of themselves; but bad as their reputation may be in sacred history, in profane history it appears to be considerably worse; there, at least, no doubt can exist in the great majority of instances as to the identity of the culprits.

Virgil introduces one of these birds among the prodigies and horrors that foreran the suicide of Dido: the whole passage is an admirable model of the shadowy medium through which supernatural terrors should be conveyed; and in the following lines we absolutely hear the death-song of the owl:

> "Solaque culminibus ferali carmine bubo
> Sæpe queri, et longas in fletum ducere voces."

Again, in the twelfth book of the Æneid, one of the Diræ sent down by Jupiter to conclude the scene between Æneas and Turnus takes the form of the bird,

> "Quæ quondam in bustis aut culminibus desertis,
> Nocte sedens serum canit importuna per umbras.
> Hanc versa in faciem Turni se pestis ob ora
> Fertque refertque sonans, clypeumque everberat alis—"

till all manhood melted within the Rutulian like wax. His unhappy sister Juturna no sooner hears and sees the fatal advent, than she exclaims in despair,

> ——————"alarum verbera nosco
> Letalemque sonum."

There can be little or no doubt that Canidia's *Strix* was a

* Physica Sacra, 1781.

species of this genus; nor need we be surprised that it should find a fit place among the ingredients of her infernal magazine—

"Et uncta turpis ova ranæ sanguine,
Plumamque nocturnæ strigis."*

Pliny, indeed, says, "Esse in maledictis jam antiquis strigem convenit: sed quæ sit avium, constare non arbitror:" allowing its bad name, but not considering it certain what bird is meant. That the portions of Canidia's laboratory above noticed, were usually considered potent in a love-charm, appears from the fifth Elegy of Propertius (lib. 3).

"Illum turgentis ranæ portenta rubetæ
Et lecta exsectis anguibus ossa trahunt,
Et strigis inventæ per busta jacentia plumæ,
Cinctaque funesto lanea vitta toro."

Again, in Ovid (Metam. lib. vii.), the bird is used by wholesale to make Medea's gruel thick and slab—

"Et strigis infames ipsis cum carnibus alas."

Now we find these *Striges* just in the company where we should expect owls to be in the Thebaid of Statius,

"Monstra volant, diræ strident in nube volucres,
Nocturnæque gemunt striges, et feralia bubo
Damna canens."

And when we presently come nearer to our own times, we shall endeavour to show that some of these passages at least must have been present to the mind of "Rare Ben," and that he who was a ripe scholar accepted the *Strix* as a screech-owl. Indeed, the description in Ovid's *Fasti* (lib. vi.) presenting us with the great head, unmoved staring eyes, beak formed for rapine, and hooked claws, suits no bird so well as an owl.

In the meantime we shall take the liberty of considering the *Strix* as good an owl after its kind as the *Bubo* itself, and follow out, with the patience of the reader, other evidence of its exceedingly wicked character.

The *Striges* appear to have been the terror of all mothers and negligent nurses:—

"Nocte volant, puerosque petunt nutricis egentes;
Et vitiant cunis corpora rapta suis.
Carpere dicuntur lactentia viscera rostris,
Et plenum poto sanguine guttur habent."
FASTI, LIB. VI.

* Hor. Epod. Lib. Ode v.

In the case particularly alluded to by Ovid, the nurse alarmed by his cry, runs to the aid of the almost exhausted infant, who is restored, and the return of the *Striges* prevented by charms, among which is the arbutus leaf.

According to that learned physician, Serenus Samonicus, female children were also subject to their nocturnal attacks.

"The little owl and the great owl" are placed under the unclean birds in our versions of the eleventh chapter of Leviticus (v. 17), though some dispute the propriety of the translation. The Seventy do not so render the words, but the Zurich edition and the Vulgate have each an owl (*Bubo*) in that verse. At any rate, owls had a very unclean reputation, and the transformation of the tell-tale Ascalaphus is marked by a concentration of the bad qualities of the form with which he was cursed:

> "Fœdaque fit volucris venturi nuntia luctûs
> Ignavus bubo, dirum mortalibus omen."

In the same spirit Queen Labe in her vengeance changed King Beder into "a *vile* owl," a metamorphosis still less desirable than his previous transformation into a white bird with a red bill and feet, to which incarnation the Princess Giauhara had consigned him. According to a provincial tradition, a baker's daughter was turned into an owl for refusing bread to our Saviour. Shakspere in "Hamlet," and Fletcher in "The Nice Valour," allude to the tale; which if not invented by some Gloucestershire monk, with a design on the oven, was probably of Eastern origin. The body of an owl was considered by Minerva a meet receptacle for the spirit of the polluted Nyctimene.

It is not to be wondered at that such a detested bird as the Bubo should be conspicuous in Pliny's chapter *De Inauspicatis avibus*:*—"Bubo funebris et maximè abominatus, publicis præcipuè auspiciis, deserta incolit: nec tantum desolata, sed dira etiam et inaccessa: noctis monstrum, nec cantu aliquo vocalis, sed gemitu. Itaque in urbibus aut omnino in luce visus, dirum ostentum est."

These be hard words, my masters, and though the Roman naturalist softens them a little by assuring us that to his knowledge the perching of the bird upon the houses of private individuals had not been fatal to them, he does not the less forget to tell us that Rome underwent lustration twice in consequence of its abominable visitation; and that on one of these occasions it had penetrated to the cella of the Capitol: Julius Obsequens in his book "*De Prodigiis*" mentions one of these luckless birds which

* Nat. Hist. lib. x. c. xii.

was caught and burnt, and its ashes thrown into the Tiber. The private visitations of the owl do not however appear to have been thought so harmless by the generality as they were by Pliny, or the offending birds would not have been nailed to the doors to avert the calamity their presence threatened.

It was in the shape of an owl that the Thessalian witch loved

> "To sail in the air
> When the moon shone fair!"

How exquisitely is the scene described in one of the most entertaining romances that ever was written.* You *see* Fotis and Lucius moving with stealthy pace towards the chink through which, scarcely daring to breathe, he beholds Pamphile take from the chest the box from which she anoints herself as she mutters her charm, till completely feathered and transformed into an owl (*Bubo*), she spurns the floor with a shriek, and flies forth with full power of wing. Man is an imitative animal, and no sooner does Lucius recover from his astonishment, than he is earnest with the reluctant Fotis to assist him with a similar ceremonial, so that in the form of a winged cupid he may clasp her to his bosom. She yields to his entreaties at last, and takes down the magic chest, handing to him from it the precious pyx. Eagerly does the ardent Lucius plunge his hand into the ointment, and having besmeared himself most diligently, confidently does he raise his arms and winnow the air in expectation of the sprouting feathers: but alas for curiosity! Fotis in her trepidation had made a slight mistake, and the discomfited Lucius, as his visage and ears lengthen, and his smooth skin becomes a hairy hide, whilst his hands and feet become solipede and quadrupedal, and his heavy head is balanced by a length of tail, discovers in agony that he has got into the wrong box. How does the distracted Fotis beat her beauteous face and bewail herself, when she sees her lover thus *translated*.

It was not to be expected that the Germans would neglect to associate this bird of evil omen with scenes of horror. It figures in Faust and in Retsch's admirable illustrations. What would the incantation scene in the "Freischutz" be, either on the stage, or in H. B.'s piquant cartoon without the owl?

Nor have our poets been less apt to take up the dark ideas of the ancients. Ben Jonson and Shakspere, among a host of others, have immortalised the evil principle embodied in this nocturnal wanderer.

* Apuleii Madaurensis Metamorph.

In "The Masque of Queens," a witch of the Canidian school* thus chaunts:

> "The screech-owl's eggs, and the feathers black,
> The blood of the frog, and the bone in his back,
> I have been getting; and made of his skin
> A purset, to keep Sir Cranion in."

The *third charm* in the same masque runs thus:

> "The owl is abroad, the bat and the toad,
> And so is the cat-a-mountain;
> The ant and the mole sit both in a hole,
> And the frog peeps out of the fountain.
> The dogs they do bay, and the timbrels play,
> The spindle is now a-turning;
> The moon it is red, and the stars are fled,
> But all the sky is a-burning."

Another witch boasts in the same masque

> "I went to the toad-breeds under the wall,
> I charm'd him out, and he came at my call;
> I scratch'd out the eyes of the owl before,
> I tore the bat's wing,—what would you have more."

Shakspere has introduced the bird into the most fearful scenes of one of his most fearful tragedies. The "owlet's wing" is an ingredient of the cauldron wherein the witches prepare their charm. Its doleful cry pierces *Lady Macbeth's* ear whilst the murder is doing:

> "Hark! Peace!
> It was the owl that shrieked, the fatal bell-man,
> Which gives the stern'st good-night—he is about it:"

and immediately afterwards, when the murderer rushes in exclaiming,

> "I've done the deed—did'st thou not hear a noise?"

she answers,

> "I heard the owl scream and the crickets cry."

* It is evident that Jonson had the fifth Epode of Horace in his mind throughout this witch scene. Another of his witches sings—

> "I from the jaws of a gardener's bitch,
> Did snatch these bones, and then leap'd the ditch."

Here we have the

> "Ossa ab ore rapta jejunæ canis,"

and in the third charm we trace the "Suburanæ canes." The "plumam nocturnæ strigis" we have already noticed.

Richard the Third, when he is irritated by the ill-news showered thick upon him, interrupts the third messenger with,

"Out on ye, owls! nothing but songs of death?"

In Fletcher's song, which begins,

"Hence all ye vain delights,"

and, not improbably, was the model from which Milton drew his "Il Penseroso," the owl is not forgotten:

"Fountain heads, and pathless groves,
Places which pale passion loves,
Moonlight walks, when all the fowls
Are warmly hous'd, save bats and owls,
A midnight bell, a parting groan,
These are the sounds we feed upon;
Then stretch our bones in a still gloomy valley,
Nothing's so dainty sweet, as lovely melancholy."

Poor Chatterton in the spirit, but not in the phraseology of the age which he selected for the date of his beautiful but transparent forgeries, thus writes in the "Mynstrelle's Songe" in his "Ælla, a tragycal enterlude,"

"Harke! the ravenne flappes hys wynge,
In the briered delle belowe;
Harke! the dethe-owle loude dothe synge,
To the nyghte-mares as heie goe;
Mie love ys dedde,
Gonne to hys deathe-bedde,
Al under the wyllowe-tree."

Gray introduces the complaint of the "moping owl" among the solemn sounds which usher in his celebrated elegy; and Scott and Coleridge have associated it with supernatural machinery. When the Lady of Branksome sits

"In old Lord David's western tower,"

and listens to the Spirit of the Flood as he calls on the Spirit of the Fell,

"At the sullen, moaning sound
The ban-dogs bay and howl;
And from the turrets round,
Loud whoops the startled owl.
In the hall, both squire and knight,
Swore that a storm was near,
And looked forth to view the night,
But the night was still and clear!"

The wild lay of "Christabel" opens with a chorus of owls:

> "Tis the middle of the night by the castle clock,
> And the owls have awakened the crowing cock;
> Tu-whit!—tu-whoo!
> And hark, again! the crowing cock,
> How drowsily it crew."

Nor has our inimitable Hogarth omitted the baleful bird in the murder scene of his "Four Stages of Cruelty."

These great masters knew that the introduction of the owl would help to make their images come home to the bosoms of the people, who had from early times associated its presence with melancholy, misfortune, and death. Every village possessed its horrible story, never complete without an owl, which had either stared in at the chamber-window of the dying, or answered the passing bell from the house-top, or surely prognosticated the speedy dissolution of the doomed by crossing his way, and strenuously endeavouring to perch on the victim.

Such dark articles of belief are rapidly fading away before the glare of gas, the rush of railroads and the gallop of intellect; they still, however, hold their sway in quiet nooks of quiet counties, which used to have their *shrew-ash* and other charms, to remedy the evils inflicted by beast or bird.

But what was a *shrew-ash?*

The common shrew-mouse (*Sorex araneus*), one of the most harmless of animals, was considered to be a very pernicious creature. Its bite was held to be venomous by the ancients; and our own ancestors believed, that if a shrew-mouse ran over the limbs of man or beast, paralysis of those limbs was the consequence.* The cure was supposed to be effected by drawing twigs torn from a shrew-ash across the parts affected, and in order to make a shrew-ash, a hole was bored in the trunk of an ash-tree, and an unhappy shrew-mouse was plugged therein with certain ceremonies, and so left to perish. Now it is known that some owls feed on these little quadrupeds; and what a concentration of *diablerie* must our ancestors have believed an owl to be after a protracted shrew-diet!

About the commencement of the present century, there lived near a village which once boasted its shrew-ash and was not far from one of the great towns in the west of England, an attorney in considerable practice. He began with nothing, but was rich, and beloved—as rich attorneys generally are; for it was averred that he had been heard to swear that he would scrape a place which is said to be paved with good intentions and is never men-

* Hence, perhaps, the old malediction, "Beshrew thee!"

tioned to ears polite, but he would leave his only child, a daughter, fifty thousand pounds: and so he did.

Well, it came to his turn to die; and you may be sure, there was much talk at the "Jolly Ringers," where the village club was held, about the alleged sworn determination of the yet unburied dead. One honest farmer declared, that he knew, a month ago, that the lawyer was not long for this world; and, being pressed for the ground of his knowledge, informed the company, not without hesitation, that the last time the deceased came from church, an owl, as he passed along the darksome by-road, flew first across the front of his coach, and then almost in at the coach-window, so that the lawyer struck at it with his hat. The farmer said that the shriek of the owl as it vanished through the overshadowing trees still rang in his ears.

Everything must have an end, and so had the sitting of the club at the "Jolly Ringers," which broke up for the night, and all wended their way homewards.

The farmer's wife had swept up the hearth three times, and nodded over her Bible a great many more, when she looked up and saw that the clock pointed to one. She now began to be seriously alarmed,—for though it was some distance to the "Jolly Ringers," her husband was regular in his habits—put on her bonnet and cloak, and with some difficulty aroused her neighbours, who went forth with lanterns to seek for him. They took the way which led across the fields from the public-house to his own, and had to go over a foot-bridge that crossed a brook almost hidden by arbeles and hazels, which lay between him and his home.

In the pathway, near the foot of the bridge on the far side, they found the object of their search stretched apparently lifeless: they recovered him with some difficulty and bore him to his house, where he long lay very ill.

On his restoration to health, if that could be called health which was a state constantly liable to fits, to which he was never before subject, he for a long time evaded with shuddering the inquiries of any one who led the conversation towards the cause of his first seizure; and it was not without evident suffering, that at length he made a clean breast to a kind friend who had watched over him during the worst periods of his illness.

The sick man declared that he was passing on his way in the moonlight, thinking not at all of the main subject of conversation at the club, but considering with what seed he should sow a small croft of his, when he raised his eyes and saw Satan in his most frightful shape, and the lawyer in his grave-clothes sitting up all pale and ghastly in his coffin, playing at dice upon the coffin-lid, which was placed across the coffin between the players. This

horrible apparition was within a very few yards of him and right across his path, at the bridge-foot. He declared that he saw the name of the deceased on the coffin-plate, and heard the dice rattle in the bone box as the black gamester was about to cast, when all his strength failed and he became senseless.

After this, the poor farmer did well enough, unless he happened to come suddenly in sight of a bridge; when he was almost sure to suffer an attack.

The story got abroad, but was hushed up—except at the club—where the decided opinion was that it was quite true, that the stake for which the lawyer was playing was his own soul, and that he was so well up to his points, that he must have risen the winner.

Some years afterwards, a youth who had been early initiated into all the village lore and something more, had left the well-appointed house of a gentleman in this very neighbourhood, known for his hospitality and scientific research, on an autumnal night made beautiful by a glorious harvest-moon. As he walked across the fields in the path which the poor farmer, then gathered to his fathers, had trod, he was musing over a learned discussion about the pixies and nixies—elves which some said even then haunted thereabouts—that had been the topic before his departure. *He* looked up and saw by the uncertain light as it struggled through the foliage, a black coffinlike mass upon tressels, just in his way at the bridge-foot. All the old story rushed upon him, his hair began to lift up his hat, and a horrible shriek sent him to the right about.

In truth, he took to his heels, and ran till he was out of breath, never daring to look behind him. As he stood panting with beating heart, the "All's well," of the sentinels of a French prison about half a mile distant, came through the night air like music: he knew the welcome sound of the human voice and was reassured. Still he felt that he would rather face a battery than that bridge: but what was he to do?

It was late. He was ashamed to go back to the house that he had left, and to which he had come by the far-distant public road, the more especially as he had been significantly cautioned, upon his declaring his intention of returning by the field-way, to "have a care of the bridge." So he took heart, faced about, and again proceeded, till a short turn brought him in sight of the bridge. There was the black object still. With the courage of despair he rushed at it—and found a carpenter's bench with some pitched boards lying upon it, which the workmen had brought for the repair of this infernal bridge. As he passed over it, an owl flew away from an overhanging tree.

Now here was a ghost-story spoiled. If the youth had but fainted or gone mad—and *men* have gone mad with terror—the worthy farmer's adventure might have been believed for another thirty years at least.

If we turn to a race now fast dying out, we shall find that the Virginian horned owl is not more welcome to the Red man than the European species was to the ancient Roman. The superstitious terror of the American Indian was, perhaps is, carried so far, that any one who presumed to mimic its hootings became an object of their high displeasure. Indeed the loud halloos with which it makes the woods resound, so that travellers have been led astray, taking its shouts for the voice of a man,* and the unearthly sounds which it sends forth in the evening from the solitudes of dark swamps covered with gigantic timber,—sounds, according to Wilson, that hardly seem to belong to this world,—may well inspire feelings of horror.

Dr. Richardson, in his "Fauna Boreali-Americana," gives a striking instance of the effect produced by the wailings of this species. Here it is in his own words,

"The Virginian horned owl is found in almost every quarter of the United States, and occurs in all parts of the fur-countries where the timber is of large size. Its loud and full nocturnal cry, issuing from the gloomy recesses of the forest, bears some resemblance to the human voice uttered in a hollow sepulchral tone, and has been frequently productive of alarm to the traveller, of which an instance occurred within my own knowledge. A party of Scottish Highlanders in the service of the Hudson's Bay Company, happened in a winter journey to encamp after nightfall in a dense clump of trees, whose dark tops and lofty stems, the growth of centuries, gave a solemnity to the scene that strongly tended to excite the superstitious feelings of the Highlanders. The effect was heightened by the discovery of a tomb, which, with a natural taste often exhibited by the Indians, had been placed in this secluded spot. Our travellers having finished their supper, were trimming their fire preparatory to retiring to rest, when the slow and dismal notes of the horned owl fell on the ear with a startling nearness. None of them being acquainted with the sound, they at once concluded that so unearthly a voice must be the moaning of the spirit of the departed, whose repose they supposed they had disturbed, by inadvertently making a fire of some of the wood of which his tomb had been constructed. They passed a tedious night of fear, and with the first dawn of day, hastily quitted the ill-omened spot."

* Lawson.

The common consent of all nations seems to have been not very complimentary to the owls.

One word more. In the ancient pharmacopœia, which, by the way, savoured not a little of magic, the owl appears to have been "great medicine." Thus, the feet of the *bubo*, burnt with the herb *plumbago*, were held to be a help against serpents. If the heart of the bird was placed on the left breast of a sleeping beauty, it made her tell all her secrets; but the warrior who carried it was strengthened in battle. A bubo's egg and the blood of its nestlings appear to have been as efficacious in preserving the hair and making it curl, as

"Thy incomparable oil, Macassar."

Pliny, indeed, begs to know, who ever saw a bubo's egg, inasmuch as the bird itself was a prodigy, and he further inquires who could try it, especially upon his hair? But he cannot deny that the ashes of an owl's eyes mixed into a *collyrium* gave clearness to the sight, and that those of its head with ointment, were good against disorders of the spleen.

And so much for fable.

This is the dark side of the picture. Those who care to see the brighter side may find a more amiable and natural character of the bird of wisdom in our next chapter.

But why is the owl dubbed the Bird of Wisdom?

Because it is the only bird that looks straight forward.

OWLS.

"The lark is but a bumpkin fowl,
He sleeps in his nest till morn;
But my blessing upon the jolly owl
That all night blows his horn."

KENILWORTH.

So doubtless thought and felt the Fly-by-night Club, who bore on their seal-rings the owl for a device, with an appropriate legend,—and thereby hangs a tale.

It was widely whispered that the posy first adopted by these minions of the moon was *Nocte fugimus*, but one of the jolly companions, who had attended to his verbs with a little more profit than his co-mates, hinted that those winged words might convey a very unclub-like notion of their prowess when confronted with the Charlies who then made night hideous, and suggested *Nocte volamus*, as more germane to the matter; which motto was engraved accordingly.

By the way, how the first verse of Master Goldthred's morsel of melody reminds one of the old well-known glee—

"Of all the brave birds that ever I see,
The owl is the wisest in his degree;
For all the day long he sits in a tree,
But when the night comes away flies he;"

or, as it has been classically rendered—though we do not find it in the *Arundines Cami*—

"Ex omnibus avibus quos video
Sapientissimus est bubo;
Nam sedet in arbore totâ die,
At cum nox venit, volat ille."

Which ought to have been chanted—perhaps it was—as the evening hymn of the volatile association aforesaid, as "Glorious Apollo," commences the harmonies of the Glee Club:—but we

proceed, according to our pledge, to a consideration of the bright side of the character of the "bonny, bonny owl."

And first, turn we to the pages of Aldrovandi. There we find in the second chapter of his eighth book, under the heading *De Bubone*, and in the middle of the page, the word

DIGNITAS

in grand Roman capitals. And what word more appropriate? What presence among the feathered bipeds *is* more dignified than that of the great horned owl, *Le Grand Duc*, as he is most appropriately named in the kingdom of Clovis? Who can look at his feathered highness, as he sits solemn and sedate, without inquiring,

"What doth gravity out of his bed at midnight?"

A question to be presently answered.

Well is he termed the eagle-owl. If Jove assumed the shape of the eagle, did not Juno select that of the eagle-owl for her mutation? For, as the learned Italian remarks, it was not decorous that the Queen of Heaven should take on herself the likeness of any small or vulgar bird, but rather that she should be embodied in one whose reign by night was coequal with that of the eagle by day—one that, if some ancient narratives be true, had not only occasionally resisted the royal bird, but contended with him so stoutly, as to leave the conflict doubtful.

Then the art military with which his grand ducal château, on some towering precipitous rock, is fortified against the only danger he fears—the attacks of man—for the brave bird

"Dallies with the wind and scorns the sun,"—

betokens deep design and counsel, and a lofty spirit withal.

"But he is a bird of evil omen according to your own showing in your last." True, gentle reader, you who do me the honour to remember the tediousness bestowed upon you—but *audi alteram partem*; in plain English, there are two sides to a case.

When Agrippa, persecuted by Tiberius, was fast bound to a tree awaiting his fate, did not the German augur, who stood beside him languishing in the like bonds, cast his eyes upwards and behold a horned owl perched in silence upon the branches, and did not he comfort the discarded favourite with the assurance that his chains should be loosened, and that he should escape to become King of the Jews, and leave children who should enjoy the kingdom after him—adding, however, by way of a cooler, that if, on the other hand, the bird still continued to hang over

his head next day, his fate was sealed, and his death might be looked for within five days,—and did not Agrippa escape from the fatal tree in good time and become King of Judæa, and did not his children reign after him? Inquire of Josephus and others, so please you, if you have any doubt.

Should this testimony be deemed to be somewhat inconclusive, cutting both ways, as the lawyers say, no one will call in question the fact, that the horned owl was held in high honour as a sacred and fortunate bird by the Tartars, who wore its feathers in their caps as a talisman to ensure success, and why?

It once happened that the Khan of Khans had taken refuge from his enemies in a thicket. They followed with hot pursuit and came straight upon his hiding-place; but there sat a guardian cherub in the shape of this noble bird, and they believing that it would never rest quiet if any man were hidden near, passed by with unbloodied scimitars. In the silence of the ensuing night the Khan made his way to his delighted followers, told them the cause of his safety, and filled them with a reverential love for the bird, that became national. The Khan had, on this occasion, as much reason for saying, "Long live the Grand Duke," as the bird had, on another occasion to cry, "Long live Sultan Mahmoud."

Then, with regard to the race in general, if the Romans had their eagle, the Athenians had their owl. Who shall deny that the last-named biped was the bird of Minerva? If any such there be, let him go to the well-arranged British Museum, where in the second room, allotted to Greek and Roman sculptures, he will find a colossal head of the goddess with an owl standing sentinel on each side of her helmet. Nor did the Romans themselves disdain the owl, at least after the Acropolis was invaded by the statue of Augustus—if ever one stood there.* On the reverse of a coin of Trajan, a large owl sits on a column of elegant proportions, rising from a plinth; and on the reverse of another of Hadrian, the bird resting on a shield is associated with a peacock, and Rome's own eagle grasping a fulmen.† If we descend to humble life, we find the owl depicted riding at its ease on the frame carried by the man in the Fullonica at Pompeii: whether to show that the establishment was under the protection of the tutelary goddess of the loom, or introduced as the familiar of the house, we leave the learned to determine.

* See Leake's "Topography of Athens."

† Consult the excellent "Descriptive Catalogue of a Cabinet of Roman Imperial large brass Medals," by Captain William Henry Smyth, R.N., &c. &c.

With regard to our own legends, we have referred to that which says that the owl was a baker's daughter: but the nurseries of our time made her the offspring of an Earl, transformed for disobedience and condemned to cry,

Oh!—hoo—hoo—my feet are cold.*

Nay, the north-country nurses, according to Nuttall, would have it that she was no less than the daughter of Pharaoh, and when they heard the owl hoot on a winter's night, would sing to the admiring child,

Oh! ŏŏŏ oō—
I once was a king's daughter, and sat on my father's knee,
But now I'm a poor Hoolet, and hide in a hollow tree.

But we must now introduce those whose owlogical education has been imperfect, to a nearer acquaintance with the organization of this genus; and although this is no place for searching physiological inquiry, we hope to be pardoned for sketching out the adaptation of the form to the wants and enjoyments of the creature.

He who delights in contrasts, need seek none more striking among birds than that exhibited by a swan and an owl. The first with a picturesque profile proudly crowning a neck so beautifully long and graceful as to rivet the attention of the veriest Cymon of a spectator; the last with a great round head, looking almost as if it were made for a hat, and a flat face, placed apparently, upon no neck at all. The long and flexible neck of the swan is ever and anon elegantly dipped into the wave, as the spotless living gondola glides over its surface, to crop the subaqueous herbage. The disk-like face of the owl turns upon the short-neck like a pivot, to catch and concentrate every twilight ray and arrest every sound, even that made by

The smallest monstrous mouse that creeps on floor;

and the bird, no doubt, derives some of its ill-omened repute from the size of the organs of vision set in this concentrating facial disk. Great staring, goggle, or saucer-eyes are popularly attributed to goblins and demons, and are prominent features in a tale of terror. One word upon the conformation of these organs, which give fulness and breadth to the head, and impart to it somewhat of an intellectual character. The eyeball is supported

* Consult Waterton.

by a lengthened, concave, bony ring, or chalice-like tube, consisting of several staves or plates fitted to each other longitudinally. The cornea is placed at the end of this tube, and so is carried out beyond the feathers of the facial disk and head, whilst the whole machinery can be adjusted at the volition of the animal with greater nicety than that of any optical instrument made by human hands, according to the quantity of light present, or the focus required. In the typical owls, the eyes are set so completely in front, that in order to see any thing at their side or a little behind them, they must turn the head entirely, and thus bring the whole concentrating apparatus to bear upon the object. In the accipitrine or less typical owls,—the hawk-owl, *Surnia funerea*, for example, which frequently hunts by day—the head is smaller, and the facial disk less perfect, so that the bird is better able to bear a strong light.

The sense of hearing is most acute. The wide and moderately deep outward *meatus* is guarded by an internal fold of skin, and provided with a well-developed auricular circle of feathers which, together, well officiate as an external *concha* to catch and convey the slightest sound. The rustling of a straw, a dead leaf, or withered herbage, may betray the "timorous beastie" that runs below. With all this, the plumage is of the softest texture, and is so contrived, that the action of flying shall not interfere with the perfect effect of the auditory machinery, or operate as a warning to the prey. The external edge of the primary quill-feathers is serrated, so that less resistance is offered, and the flight is performed noiselessly, in strong contrast with the whirring-wing of the partridge, whose heavy body is borne off with a startling sound that brings the heart of the inexperienced sportsman into his mouth, and often saves the game. Both bone and muscle are kept down to the lowest point in the owl to make it as light as possible; and thus framed and feathered, the bird

> Floats in the air like a downy balloon.*

The family of owls known to modern zoologists by the somewhat disreputable name of *Strigidæ*, is very numerous and its geographical distribution very extensive. In all lands from the Arctic circle to Port Famine, and perhaps to the south of that ominous locality, owls are to be found. Any attempt to enumerate the species would be an infliction which we, at least, have not the heart to administer.

An account of the British owls including the visiters, will be as much as the most resigned reader, who is not of the deepest orni-

thological blue can bear; and to these *Strigidæ* we promise to confine ourselves.*

We have not a regularly migratory owl among us except the short-eared owl (*Strix brachyotus*), and probably the little horned owl (*Scops*). The other true British *Strigidæ* are honest stay-at-home people, and are quizzed accordingly. We will begin with the residents, then take a look at the emigrants, and conclude with the occasional visiters.

Of the residents, the typical barn-owl, white owl, church-owl, gilli-howlet, screech-owl, *Strix flammea*, to mention only a few of his names, first attracts our attention with his downy buff coat, well powdered occasionally with black, white, and gray, and his snowy waistcoat. Though he stays with us all the year, his race is spread over a great part of the world, and they are to be found settled all over temperate Europe, and as far south as the Cape of Good Hope, not disdaining Japan and India, but eschewing America.

The habits of this species—but White has so beautifully and succinctly described them that we dare not venture on any description of our own.

"We have had," says the charming author of "The Natural History of Selborne"—"ever since I can remember, a pair of white owls that constantly breed under the eaves of this church. As I have paid good attention to the manner of life of these birds during their season of breeding, which lasts the summer through, the following remarks may not, perhaps, be unacceptable:

"About an hour before sunset (for then the mice begin to run) they sally forth in quest of prey, and hunt all round the hedges of meadows and small enclosures for them, which seem to be their only food. In this irregular country we can stand on an eminence and see them beat the fields over like a setting-dog, and often drop down in the grass or corn. I have minuted these birds with my watch for an hour together, and have found that they return to their nest, the one or the other of them, about once in five minutes; reflecting, at the same time, on the adroitness that every animal is possessed of as far as regards the wellbeing of itself and

* This resolution requires great self-control. There is hardly an owl in the five quarters of the world—for Australia must now be considered the fifth—about which much might not be written. That burrowing owl, *Noctua cunicularia*, the chum of the bizcacha, is one among a host of transatlantic subjects that force themselves upon our attention, clamorous for notice; but the borough-monger has never appeared among us, in feathered form at least, and we must be firm. New Zealand has lately supplied us, amongst other ornithological monstrosities, with a bird which may be said to be half an owl and half a parrot. (*Strigops*, Gray.)

offspring. But a piece of address which they show when they return loaded, should not, I think, be passed over in silence. As they take their prey with their claws, so they carry it in their claws to their nest; but as the feet are necessary in their ascent under the tiles, they constantly perch first on the roof of the chancel, and shift the mouse from their claws to their bill, that the feet may be at liberty to take hold of the plate on the wall as they are rising under the eaves.

"White owls seem not (but in this I am not positive) to hoot at all; all that clamorous hooting appears to me to come from the wood kinds. The white owl does indeed snore and hiss in a tremendous manner; and these menaces well answer the intention of intimidating; for I have known a whole village up in arms on such occasions, imagining the churchyard to be full of goblins and spectres. White owls also often scream horribly as they fly along; from this screaming probably arose the common people's imaginary species of *screech-owl*, which they superstitiously think attends the windows of dying persons."

White was seldom wrong, and we here see that he qualifies the assertion touching the non-hooting of this species. The general opinion of naturalists was, that the barn-owl was never known to hoot, and so thought Montagu, a good observer. But Sir W. Jardine shot one in the midst of its hooting solo, and he states that hooting is their usual cry at night when undisturbed. Yarrell, we think, comes nearest to the truth, when he states that this owl screeches, but does not generally hoot. That it does hoot occasionally there can be no doubt; but the well-known nocturnal concerts are, we believe, principally due to the performers mentioned by White.

The nest is generally formed, rudely enough, in some old building, and the number of white eggs, somewhat more oval than those of the brown or wood owl, is three or four. The young, who stick to the nest a long time,—as long, indeed, as the old ones will procure mice for them,—are at first covered with a white down. Sometimes three different hatches of these animated, important-looking powder-puffs are to be found in the same cradle, and not unfrequently eggs are discovered along with them.

This owl has a spice of the poacher about him, for he is a night-fisher as well as a mouse-hunter, and has been seen to plunge into a lake by moonlight, and bear away a perch to his nest. The claw of his middle toe is serrated, and perhaps helps him on these slippery occasions. He and his have found a zealous advocate in the warm-hearted proprietor of Walton Hall; and every farmer ought to respect this eagle of the mice.

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The tawny owl, ivy owl, or brown owl, (*Surnium aluco*) clad in his russet coat, is a sylvan hermit with a dash of the poacher about him too,—a sort of feathered clerk of Copmanhurst, for

"He whoops out his song and he laughs at his jest,"

living ostensibly on very simple food, but making free every now and then with a young rabbit or mayhap a leveret, and occasionally fastening upon the best that the stream or pond contains, whether it swims on the surface of deep waters, or lies at the bottom of shallow brooks, like the loach and the miller's thumb, which last is better known to the Wykehamist schoolboy, who goes after him with a fork instead of a trident, as a "Tom Cull." The old birds have been seen to feed their young with these little fishes alive and struggling from the stream; and brown owls have been more than suspected of stealing gold and silver fish.

This is a truly nocturnal species, hiding itself by day in the darkness of deep forests, and never willingly venturing forth till sunset; for it bears the light worse than the barn-owl.

Cowper has admirably sung the "sidling" and "ogling" of a small-bird flirtation; but he does not appear to have ever witnessed the grand passion of an owl; would that he had! Such a serious affair is only to be observed by the out-door naturalist, who will bury himself for hours in the depths of the quiet woods near some favourite owl-tree.

If he is so fortunate as to see the courtship on some warm, gloomy, spring day, whose stillness is only broken by the pattering of the shower, or the "minute drops" that fall from the moss-grown trees, he will be well repaid for his watching, by the solemnization. The Hudribastic air with which the lover approaches, making lowly gesticulations, as if to

"Honour the shadow of the shoe-tie"

of the prim, quaker-like figure, that receives all these humilities with the demure, starched demeanour of one of Richardson's heroines, only now and then slowly turning her head towards the worshipper, when she thinks she is not observed, but instantly turning it away when she thinks she is,—and the occasional prudish snap of her bill, when she is apprehensive that he is going to be rude—make a scene truly edifying.

This is the species that makes the moonlight woods echo with its hootings, when, as White remarks, its throat swells as big as a hen's egg. Nor is it vocal in the night alone, for when in love, it will hoot in the middle of the day—at least a South-Welsh owl will.

Owls are not beloved by other birds, especially the smaller

ones, for the latter know well enough that the former will make no scruple of gobbling up their young ones, and sometimes make free with themselves: Sir W. Jardine found the remains of a thrush in an individual of the species of which we are now treating. The German bird-catcher takes advantage of this antipathy, particularly when he wants a few jays, and, according to Bechstein, he proceeds after the following fashion:

In the autumn he seeks in a wood for a tree standing alone, a few yards from the others most frequented by birds, and on it places his limed twigs. In order to lay his twigs effectively, he so cuts off most of the branches as to form a kind of spiral staircase, beginning this operation some ten or a dozen feet from the ground, and continuing it to within six feet of the top. The branches being thus shortened to the length of five or six spans, he builds a leafy hut of green branches large enough to conceal as many of his companions as are selected to enjoy the farce about to be enacted. On the top of his hut he sets up a live owl, or, if he has none, the image of an owl made of clay, or, in default of either, the skin of a hare so managed that motion may be given to it. All being ready, and the twilight approaching, nothing is wanting but his bird-call, made of a small stick with a notch cut in it, and a little piece of the bark of the cherry-tree inserted, another bit serving for the cover. With this he imitates the voice of the owl, for whom the jays have as much affection as the population of the Queen's Bench prison for the hapless gent, "one etc.," who is caught within its royal precincts.

As soon as the jays hear the voice of their detested enemy down they come screeching from all sides, whilst the repetition of their cries by the bird-catchers in the hut, causes them to assemble in greater numbers. Entangled in the birdlime, crowded and sticking together and dragging each other down, the whole surprised and peevish mass falls pell-mell in a fluttering, squalling conglomeration into the hut, their weight carrying them through its slight covering, and they are secured by the bird-catchers. Nor are jays the only birds taken on these occasions; for many others, such as magpies, thrushes, wood-peckers, and even redbreasts and tits hearing the row, hasten to the assistance of their allies the jays, and share their fate.

The eggs of the wood or brown owl, which is widely extended over Europe, and has been found in Smyrna and Japan, are generally deposited in the hole of a decayed tree: but the bird sometimes takes possession of the deserted nest of a carrion crow, or a magpie, and sometimes selects a hole in a rock. When the large eggs, which are from three to four in number, white, and nearly round, are laid in such holes, the bottom of them is

generally smoothed, where practicable, and a few slender sticks, straws, or leaves of grass are placed over it. The downy young are of a grayish white, and stay long in the nest where they are assiduously fed by their parents. When they quit the nest they perch on the neighbouring branches and are still catered for by the old ones, till they are well able to provide for themselves.

Some of the owl-trees are haunted for years by these birds, and contain the *rejectamenta* of many generations. White records the grubbing up of "a vast, hollow, pollard ash that had been the mansion of owls for centuries" and the mass of matter that was discovered at the bottom. This proved to be "a congeries of the bones of mice (and perhaps of birds and bats) that had been heaped together for ages, being cast up in pellets out of the crops of many generations of inhabitants. For owls cast up the bones, fur, and feathers of what they devour, after the manner of hawks." White's informant told him that he believed there were bushels of this kind of substance; and this habit should be remembered by those who keep owls in captivity, for if they are not given mice in the fur, and birds in the feather, they are apt to die of decline, for want of a proper cleansing of the stomach. White states that he has known a brown owl live a full year without any water.

The Dominie Sampson style in which our learned feathered friend bolts his late dinner, and the gesticulations in which he indulges, are set forth in the ancient quatrain beneath the effigy of the *Aluco* that adorns the *Portraits d'Oyseaux:*

"Le Chat-huant, ou Hibou, de la teste
Imite et fait les gestes d'un danseur.
Son gousier est tant large qu'il est seur
D'avaler vif un Rat, ou telle beste."

This owl is no great respecter of property, in captivity at least, and will often hide things like the magpie and its congeners: we can answer for the abstraction of an anodyne necklace by one;—but this brings back another to our remembrance, that owl of owls, Captain Face as he was named, and his being sent to sea in the horse-pond on a duck's back, and the divings of the animated bark when the captain in his terror stuck his claws into it, and his submersion upon the instant, and his hooting astonishment as he emerged, only to gripe harder and be again more deeply ducked, till both were captured for fear of consequences and the captain was unbound, shaking his feathers and staring at the perpetrators with a vacant expression, as who should say, "what *does* all this mean?" These aquatic excursions were inflicted upon the captain whenever he got a little seedy and moping, and they certainly did him good.

The long-eared owl, *Otus vulgaris, Le Moyen Duc* and *Hibou cornu* of the French, but to which the Italians give the somewhat ominous name of *Duco Cornuto,* is a very beautiful bird, elegantly dappled with black and dark brown on pale brown. He loves the ivied tree and the thickest shades. Sir W. Jardine describes him well:

"In a dull winter evening, he is frequently seen abroad before sunset; and when disturbed during the day, the flight, though sailing and buoyant, is bold and strong. He perches openly, and, when approached, you can perceive his orange-coloured eyes dilated, brilliant, and expressive, his long egrets raised and depressed; he is aware of being pursued, and a second flight is taken before a very near approach can be gained."

This owl generally looks out for the deserted nest of some carrion crow or squirrel, though it will sometimes make a rude one for itself. The oval white eggs are four or five in number, and the young are covered with white down. Whilst they are perchers they utter a plaintive evening cry; but the adult birds are said to be almost silent in this country. Rats and mice are its principal four-footed prey, and it frequently steals upon the hapless small birds as they roost in fancied security, and snaps them up. It is widely spread over the world. All Europe possesses it, and it has been traced as far eastward as Astracan. To the south it has been seen in Trebizond, Egypt, and Africa. Our northern travellers and voyagers found it in high latitudes. Dr. Richardson* states that it has been found in America as far north as 60°, and probably extends as high as the forests reach. It is the *Ammiskoho* (beaver owl) of the Cree Indians. The Indians brought to Dr. Richardson a nest which was in a bush and contained one egg: he adds that Mr. Drummond found a nest on the ground with these eggs, and killed both the birds, and that the abovementioned eggs were smaller than those of the English bird.

It is found in most of the United States. Nuttall† states that it seldom, if ever, takes the trouble to construct a nest of its own, seeking shelter amid ruins and hollows of trees, and resting content with the half-ruined nursery of the crow, the magpie, the wild pigeon, or the buzzard, and even the tufted retreat of the squirrel.

Wilson found one of these birds sitting on her eggs in the deserted nest of a Qua-bird (*Nycticorax*) in April, near Philadelphia, in the midst of the gloomy swamped forest to which

* Fauna Boreali-Americana.

† Manual of the Ornithology of the United States and Canada.

those herons resorted, and one of the quas had a nest in the same tree with the owl.

Nuttall says that this owl makes a hollow mourning, expressed by the words *clōu clōud* incessantly repeated during the night, so as to be troublesome, and that it is employed as a decoy. He further remarks that it is almost a denizen of the world, being found from Hudson's Bay to the West Indies, throughout Europe, in Africa, Northern Asia, and probably China, in all which countries it appears to be resident. It is said to be the most common owl in France.

"Le moyen Duc, ou bien Hibou cornu,
Comme le Duc par satyrique geste
Donne plaisir, et a cornes en teste.
Aux monts d'Auvergne il est assez cognu."

We now come to the only known regularly migrating British owl; for though it is believed, and with reason, that the *Scops*, so rare with us, is a regular visiter, the fact has not been ascertained.

The short-eared owl (*Brachyotus palustris*) comes to us from the north about October: but Sir W. Jardine has recorded the breeding of some on the Scottish moors, where it is well known to the grouse-shooter. The nest was a hole scraped in the ground. In consequence of the general arrival of these birds in the southern parts of Britain with the first fair October winds, they are called woodcock-owls, an appellation branded on the memory of more than one luckless would-be sportsman.

From some turnip-field hard by a plantation, or a tuft of rushes close to a copse on a moist hill-side, up springs a russet-plumaged bird and is in the cover in a moment.

The eager shooter "catches a glintse on 'in," as an old keeper used to say, through the trees: bang goes the gun.

"That's the first cock of the season!" exclaims he, exultingly.

Up comes John, who has been sent, ostensibly, to attend him, but really, to take care of him.

"I'm sure he's down," pointing to the cover—as many are apt to say when they shoot at a cock, without being able to produce the body.

"Well—let's look, sir—where did a drop?"

"There—just by that holly."

In they go, retriever and all.

"There he lies," cries the delighted shot, loading his gun triumphantly in measureless content; "dead as Harry the Eighth. I knew he was down—there—just where I said he was, close by that mossy stump—can't you see?"

"Iss, sir, I sees well enough, but I don't like the looks on 'in:—his head's a trifle too big, and a do lie too flat on his face."

"Pick up the cock, I say," rejoins our hero, somewhat nettled.

"I can't do that, sir," says John, lifting a fine specimen of *Otus palustris*, and holding it up to the blank-looking cockney, amid the ill-suppressed laughter of those confounded fellows who attend to mark not only the game, but the number of shots that are missed on their abominable notched sticks.

"Never mind, sir," adds the comforter John, "if t'ant a cock, a did kip company wi' em; and a's curous like, and since you ha'nt killed nothen else to-day, I'd bag un, if I was you: he'll look uncommon well in a glass case."

This owl, again, is widely spread over the whole continent of Europe, over India, and Africa. It has been found in America, where it is the *Tho-thos-cau-sew* of the Cree Indians, as far north as 67°. In summer, it haunts Hudson's Bay, Labrador, and Newfoundland. In winter, it goes as far south as Pennsylvania.

The scops-eared owl, or little horned owl, *Scops Aldrovandi*, *Le Petit Duc* and *Huette* of the French, *Zivetta* and *Chiù* of the Italians, is a very pretty little bird, the tints, shadings, and pencillings of whose plumage it is impossible to describe verbally. It is very rare in England, and generally considered to be a summer visiter, retiring southward to the warmer parts of Europe, and to Africa, before the cold weather sets in.

Mr. John Hogg states in his "Natural History of the Vicinity of Stockton-on-Tees," that it breeds in Castle Eden Dene. In France, where it is far from common, its arrival and departure are looked for at the same time as the advent and disappearance of the swallow.

Mr. Spence, the well-known coadjutor of the Rev. William Kirby, gives an interesting account of its habits in "Loudon's Magazine of Natural History."

"This owl," says Mr. Spence, "which in summer is very common in Italy, is remarkable for the constancy and regularity with which it utters its peculiar note or cry. It does not merely 'to the moon complain' occasionally, but keeps repeating its plaintive and monotonous cry 'kew, kew,' (whence its Florentine name of *Chiù*, pronounced almost exactly like the English letter Q), in the regular intervals of about two seconds, the livelong night, and until one is used to it, nothing can well be more wearisome. Towards the end of April, last year (1830), one of these owls established itself in the large *Jardin Anglais*, behind the house where we resided at Florence; and, until

our departure for Switzerland in the beginning of June, I recollect but one or two instances in which it was not constantly to be heard, as if in spite to the nightingales which abounded there, from nightfall to midnight (and probably much later), whenever I chanced to be in the back part of the house, or took our friends to listen to it, and always with precisely the same unwearied cry, and the intervals between each as regular as the ticking of a pendulum. This species of owl, according to Professor Savi's excellent *Ornitologia Toscana*, vol. i. p. 74, is the only Italian species which migrates; passing the winter in Africa and Southern Asia, and the summer in the south of Europe. It feeds wholly upon beetles, grasshoppers, and other insects."

In the *Portraits d'Oyseaux*, the following quatrain appears beneath the figure of this Little Duke:

> "Une Huette est petit Duc nommée,
> Pour ressembler au grand Duc, et moyen
> Entièrement. De vray elle n'a rien
> De différent, mais est ainsi formée."

This elegant miniature species closes the list of British owls, properly so called, and we now proceed to a rapid sketch of the occasional visiters.

The hawk-owl, *Surnia funerea* (American and English), which as we have before observed, hunts by day, and, as might be expected, has, like the snowy owl, the facial disk less perfect than that of the nocturnal owls, can hardly be said to be a voluntary visiter; for the only instance recorded is the arrival of one on board a ship off the coast of Cornwall, whence it was afterwards landed and lived a short time in captivity; but the trim little owl, or passerine owl, *Athene Noctua* of the Prince of Canino, *Strix passerina* of authors, has been taken several times; and more rarely, another small species, Tengmalm's owl, *Nyctale Tengmalmi* of the Prince of Canino, *Strix Tengmalmi* of authors. This elegantly-marked owl is abundant in North-America, where it is the *Cheepai-peethees*, and *Cheepomesēēs* (death-bird) of the Cree Indians.

"When," says Dr. Richardson, "it accidentally wanders abroad in the day, it is so much dazzled by the light of the sun as to become stupid, and it may then be easily caught by the hand. Its cry in the night is a single melancholy note, repeated at intervals of a minute or two; and it is one of the superstitious practices of the Indians to whistle when they hear it. If the bird be silent when thus challenged, the speedy

death of the inquirer is augured; hence its Cree appellation of death-bird."

The great snowy owl, *Nyctea candida* of the Prince of Canino, *Strix nyctea* of authors, which is a mighty hunter, and adroit fisher by day, in the northern and arctic regions at least, striking at the hare in its course, and clutching his finny prey with one sudden stroke of his powerful foot as he sails over the water, or watches patiently, perched on a stone in the shallows, with his legs and feet defended from the cold by his thick feather-boots, has occasionally been driven to our shores, less frequently, however, than the great horned owl, or eagle owl, *Bubo maximus* of Sibbald, *Strix Bubo* of Linnæus, the Grand Duke hereinbefore celebrated.

But even his visits are so few and far between, that we are not justified in inflicting upon our readers his natural history and the feats that he does in the cold starlight when he leaves his lofty abode, or those done to him by the old French falconers, who turned him out with the appendage of a fox's tail, in order to entrap the kite that was sure to fly after him, if there was one in the country, to observe what Mrs. Tabitha Bramble would have called the "phinumenon," though the temptation thereunto be strong.

So we are fain to conclude with the old quatrain of 1557, lamenting at the same time that though the Italians named him *Duco* and *Dugo*, they also called him *Bufo* (as Belon writes it, though we much doubt whether he has not omitted an "f") and, what is worse, give him at the present day the appellation of *Gufo*.

In truth he *does* appear to have earned for himself among them and our mercurial near neighbours the character of a very funny fellow, a character that we have often suspected from the accounts of the ancient dance ycleped *Bubo*. There is but one step from the sublime to the ridiculous:—

> "Le Duc est dit comme le conducteur
> D'autres oyseaux, quand d'un lieu se remuent.
> Comme Bouffons changent de gestes, et muent,
> Ainsi est-il folastre et plaisanteur."

PARROTS.

"O pretty, pretty Poll."
BEGGARS' OPERA.

"THE noble Philip Marnixius of St. Aldegond," quoth Clusius, in his "Discourse," "had a parrot, whom I have oft heard laugh like a man, when he was by the by-standers bidden so to do in the French tongue, in these words—*Riez, Perroquet, riez*—yea, which was more wonderful, it would presently add in the French tongue, as if it had been endued with reason, but doubtless so taught, *O le grand sot qui me faict rire*, and was wont to repeat these words twice or thrice."* Whether it may be the lot of our parrots to provoke a smile, or, like the Parakeet of Topaze, which was hatched before the deluge, had been in the ark, had seen much, and was sent for by Rustan to amuse him till he went to sleep again, we shall be able to keep the reader awake, we know not. At all events, we should be more than satisfied if we were possessed of a tithe of its qualities for story-telling. "Sa mémoire," says Topaze to Rustan in Le Blanc and Le Noir—what an opera that tale would make in these days of splendid scenery—"Sa mémoire est fidèlle, il conte simplement, sans chercher à montrer de l'esprit à tout propos, et sans faire des phrases." But, if we should, indeed, shower poppies with effect, happy, in this world of care, will be the *eyelids* they *weigh down*. Sancho, at least, in such a case, would have blessed us for our invention.

Now, thinks the Poppy-expectant, for the old stories of Bluff King Hal's Parrot, and—in the exquisite spelling of Aldrovandi—"Gibe the Knabe a Grott," *id est*, adds the worthy, *da nebuloni solidum*. No—neither shall we dwell on Colonel Kelly's parrot; nor on the ill-used bird that, in consequence of having told of what it ought not to have seen, was made to believe a

* "Clusius, his Discourse and Account of Parrots."—*Willughby's Translation.*

hand-mill, a watering-pot, and burnt rosin, a storm of thunder and lightning as good as any that Mr. Crosse brings into his house from

"clouds
With heaven's artillery fraught."

Not that we have not a great respect for the birds above hinted at, and, indeed, for all of these Anthropoglotts, as the Greeks called them, from the similitude of their fleshy tongues to that of man, whether, like the Cardinal's parrot, they can say the Apostle's creed or not; though we do not, perhaps, carry our veneration quite so far as the learned Cardan, who was of opinion that they meditated as well as spoke. Their fondness, their jealousy, their hatred—their exhibition of many of the passions which make the human race happy or miserable, beloved or odious, would be enough to interest us: but they are, moreover, a kind of link between the living and the dead—between the nations now upon earth and those mighty ones that have been swept from it for ever. The same form, nay, the same indentical species of parakeet* that was caressed by Alexander, and nestled in the bosom of Thais—that sat on the finger of Augustus, and fed from the lip of Octavia—may now be the plaything of a London beauty.

But of these ancients more anon. We will begin with the parrots of the New World. Their habits, in a state of nature, are well known; and in none of the *Psittacidæ* is the bill more highly developed. This organ is not merely a powerful seed-and-fruit-stonecracker, to speak Benthamitically, but it is also a scansorial organ, as any one may perceive who will take the trouble to observe these birds as they climb about their cages; and in some of the Maccaws it is enormous. The Patagonian Arara,† no less than seventeen inches in length, of which the tail is nearly nine, lives in the summer in the mountain-regions of Paraguay, Buenos Ayres, Patagonia, and Chili, breeding in the holes of trees and rocks; but the approach of autumn is the signal for their gathering, and in desolating flights, these mountaineers

"Rush like a torrent down upon the vale,"

stripping the gardens and laying waste the cultivated fields, undeterred by the numbers which fall before the plundered owners. Upon such occasions there seems to be a sympathy

* Palæornis Alexandri.

† Arara Patagonica of Lesson; Psittacus Patagonicus of D'Azara.

among these birds that ensures their destruction: thus the Carolina Arara,* which is found as high up as 42 degrees of north latitude, and formerly was to be seen as far north-east as

"Wild Ontario's boundless lake,"

feeds in great flocks crowded together. The gun of the enraged husbandman cuts a terrible lane through them while they are thus employed: then comes a painful scene. "All the survivors rise, shriek, fly round about for a few minutes, and again alight on the very place of most imminent danger. The gun is kept at work; eight, or ten, or even twenty, are killed at every discharge. The living birds, as if conscious of the death of their companions, sweep over their bodies, screaming as loud as ever, but still return to the stack to be shot at, until so few remain alive that the farmer does not consider it worth his while to spend more of his ammunition."†

Here we have a striking example of the effect produced by man, and, in this case, by civilized man, upon the animal creation. This species is fast diminishing before the colonist. Audubon remarks that about five-and-twenty years ago, "They could be procured as far up the tributary waters of the Ohio as the great Kenhawa, the Scioto, the heads of the Miami, the mouth of the Manimee at its junction with Lake Erie, on the Illinois river, and sometimes as far north-east as Lake Ontario, and along the eastern districts as far as the boundary line between Virginia and Maryland. At the present day, few are to be found higher than Cincinnati, nor is it until you reach the mouth of the Ohio that Parakeets are met with in considerable numbers. I should think that along the Mississippi there is not now half the number that existed fifteen years ago." These richly plumed birds—Audubon says that a stack on which they alight looks as if a brilliantly-coloured carpet had been thrown over it—are eminently social; for it appears, in addition to the anecdote above given, that many females lay their eggs together, the place of deposit being, as it is in most of the family, the holes of decayed trees. We must give one more picture of the habits of the Carolina Arara, drawn by the same masterly hand that sketched the preceding death-scene, because it will convey a good idea of the general manners of the *American* Parakeets:—

"The flight of the Parakeet is rapid, straight, and continued through the forests, or over fields and rivers, and is accompanied

* Arara Carolinensis. Psittacus Carolinensis of Linnæus.

† Audubon, American Ornithological Biography, vol. i. p. 136.

by inclinations of the body which enable the observer to see, alternately, their upper and under parts. They deviate from a direct course only when impediments occur, such as the trunks of trees or houses, in which case they glance aside in a very graceful manner, merely as much as may be necessary. A general cry is kept up by the party, and it is seldom that one of these birds is on wing for ever so short a space without uttering its cry. On reaching a spot which affords a supply of food, instead of alighting at once, as many other birds do, the Parakeets take a good survey of the neighbourhood, passing over it in circles of great extent, first above the trees, and then gradually lowering until they almost touch the ground; when suddenly re-ascending, they all settle on the tree that bears the fruit of which they are in quest, or on any one close to the field in which they expect to regale themselves.

"They are quite at ease on trees or any kind of plant, moving sideways, climbing or hanging in every imaginable posture, assisting themselves very dexterously in all their motions with their bills. They usually alight extremely close together. I have seen branches of trees as completely covered by them as they could possibly be. If approached before they begin their plundering, they appear shy and distrustful, and often at a single cry from one of them, the whole take wing, and probably may not return to the same place that day. Should a person shoot at them as they go, and wound an individual, its cries are sufficient to bring back the whole flock, when the sportsman may kill as many as he pleases. If the bird falls dead, they make a short round, and then fly off.

"On the ground, these birds walk slowly and awkwardly, as if their tail incommoded them. They do not even attempt to run off when approached by the sportsman, should he come upon them unawares; but when he is seen at a distance, they lose no time in trying to hide, or in scrambling up the trunk of the nearest tree, in doing which they are greatly aided by their bill.

"Their roosting-place is in hollow trees, and the holes excavated by the larger species of woodpeckers, as far as these can be filled by them. At dusk, a flock of Parakeets may be seen alighting against the trunk of a large sycamore, or any other tree, when a considerable excavation exists within it. Immediately below the entrance the birds all cling to the bark, and crawl into the hole to pass the night. When such a hole does not prove sufficient to hold the whole flock, those around the entrance hang themselves on by their claws and the tip of the upper mandible, and look as if hanging by the bill. I have frequently seen them

in such position by means of a glass, and am satisfied that the bill is not the only support used in such cases."*

We must pass by the other American parakeets, and leave unwillingly, such grand birds as the Great Green Maccaw,† the Blue and Yellow Maccaw,‡ the Red and Blue Maccaw,§ the Hyacinthine Maccaw,‖ and the noble Parrot Maccaw,¶ gorgeously magnificent though they be; merely observing, that the first-named of these is found in the Andes as high as 3000 feet, that it was considered an acceptable gift when presented to the Incas by their subjects, and that when on its gregarious predatory excursions a watch is kept on some high station—the top of a tree generally—to warn the plunderers of the approach of danger, by a loud and singular cry, on hearing which they immediately take wing.

Nor is New Holland without its parakeets of varied forms and habits, though small when compared with the American tribes. The elegant Pale-headed Broad-tail, *Platycercus palliceps*; the pretty Hobart Ground Parrot, *Nanones venustus* of Vigors and Horsfield; and the delicate Golden-eared or Crested Parakeet, *Nymphicus Novæ Hollandiæ* of Wagler, *Leptolophus auricomis* of Swainson, are "beautiful exceedingly." Then there is the lovely genus *Trichoglossus*.** Like the humming-birds, those Peris of the feathered race, the food of these charming parakeets is, principally, the nectar of flowers—nothing more gross than the juices of delicious fruits do they touch. A suctorial tongue of the most exquisite workmanship fits them for this diet of the gods. Woe to the unhappy captive whose mistress does not know this; it starves in the midst of apparent plenty. One of these wretched ones, when a coloured drawing of a flower was presented to it, applied its parched tongue to the paint and pasteboard; and even did this in the extremity of its distress, to the ruder image on a piece of flowered chintz.

But hear the stern voice of Cato the Censor—"O! conscript fathers—O! unhappy Rome. On what times have we fallen, when we behold these portents in the city—men, Romans, parading parrots on their fists, and women cherishing dogs!" One of these portents must have been the Ring Parakeet,

* Audubon, Ornithological Biography, vol. i. p. 137.

† Macrocercus militaris. Psittacus militaris of authors.

‡ Macrocercus Ararauna.

§ Macrocercus Aracanga.

‖ Macrocercus Hyacinthinus.

¶ Psittacara nobilis. Psittacara frontata, Vigors. Psittacus nobilis, Latham.

** Vigors. An Australian group, taking the place of the Indian Lories in New Holland. Some ornithologists call them Lories, others Lorikeets.

Palæornis Alexandri,* alluded to above, and said to have been brought from India to Europe by the followers of the victorious Macedonian. The descriptions of both Greeks and Romans, to say nothing of antique gems and paintings, leave no doubt that this was one of the species at least; and it should be remembered that, till the time of Nero, "by whose searchers (as Pliny witnesseth) parrots were discovered elsewhere, viz. in Gagaude, an island of Æthiopia;" none but Indian parakeets (*Palæornis*) were known at Rome. Highly were they prized, and, in spite of the Censor, gorgeously were they lodged. Their cages were of gold, and ivory, and tortoiseshell, and the houses and streets of the imperial city rang with the "Hail, Cæsar!" of the occupants. If the manes of the celebrated sparrow were appeased by the "melodious tear" of Catullus, Ovid and Statius poured forth the elegy of the imitative Indian bird, and Martial made it the medium of a refined compliment,

> "Psittacus a vobis aliorum nomina discam,
> Hoc didici per me dicere—Cæsar, Ave!"

Though Constantine does not name the bird, Aldrovandi doubts not that it was a parakeet that turned the heart of the Oriental Emperor Basilius, by repeating, for his condemned and incarcerated son Leo, those lamentations which it had learned from the sorrowing women; a son whom he again took to his bosom, leaving him the empire as an inheritance. There were evidently schools for these feathered scholars. Ælian says they were taught like boys, and Pliny states that they were corrected with an iron ferula (*ferreo radio*) during their instruction. The same method of castigation is alluded to by Apuleius and Solinus.

Under the later Emperors, the parrot became one of the rarities of their monstrous feasts; for, though Heliogabalus fed his lions, panthers, and other *carnivora* with parrots and pheasants, he took care to have a grand dish of their heads for his own table. If he had selected the bodies, it might have been better, for the flesh of some of the species is said to be excellent; and we suspect that Little Pickle was not aware what a delicacy he might have been serving up when he caused a parrot and bread-sauce to be laid before the old gentleman.

Next to the affection, almost amounting to passion for youth, especially of the softer sex, the friendship of the Indian parakeets for doves is said to have been the most remarkable. We can fancy the portico of the Xystus, in one of the elegant houses at

* Vigors. Psittacus torquatus, Macrourus Antiquorum of Aldrovandus. Psittacus Alexandri of Linnæus.

Pompeii, enlivened by a group of the family, attended by their fond and friendly birds.

To come to more modern times; there are instances of attachment on the part of these birds that would shame other bipeds. They seem most sensibly alive to the caresses of their beloved mistress; and their gesticulations expressive of rage and hatred when a rival is noticed by her show what an indignant favourite feels at an infidelity. One of these affectionate creatures would never settle itself on its perch, however late it might be, till it was taken out of its cage and replaced with a kiss and a "good night."

The Parakeet, of which the anecdote is told by Clusius, was most probably the Red and Blue Maccaw, mentioned above.

"Among others," says that author, "I saw one of those great ones in the house of the illustrious Lady, Mary of Bremen, Dutchess of Croy and Areschot, of happy memory, before she went out of Holland, the like whereto, for variety and elegancy of colours, I do not remember to have ever seen. For though almost all the feathers covering the body were red, yet the feathers of the tail (which were very long) were partly red and partly blue; but those on the back and wings parti-coloured of yellow, red, and green, with a mixture also of blue. Its head about the eyes was white and varied with waved black lines. I do not remember the like parrot described in any other author. Moreover, this bird was so in love with Anna, the Dutchesse's niece, now Countess of Meghen and Baroness of Grosbeke, that whenever she walked about the room it would follow her, and if it saw any one touch her cloaths would strike at him with its bill; so that it seemed to be possessed with a spirit of jealousie."*

Of the short-tailed parrots, or parrots properly so called (subfamily *Psittacina*), there are species both in the new and old world. The Parrot of the Amazons,† commonly known as the Green Parrot, and celebrated for its conversational powers, will serve as an example of the American true Parrots. Brilliant as are the talents of this species, its African brother, the Gray Parrot,‡ does not yield to it in eloquence. The cardinal's bird that could repeat the whole of the Apostles' creed, and for which, in the year of God 1500, a hundred gold crowns were paid, is believed to have been of this species; and so was the bird of which M. de la Borde declares that it served as chaplain to a vessel, reciting the prayer to the sailors, and afterwards repeating the rosary—

> "It was a Parrot of orders gray
> Went forth to tell his beads."

* Clusius, his Discourse—*Willughby's Translation.*

† Psittacus Amazonicus of authors.

‡ Psittacus erithacus of Linnæus.

The Gray Parrot will breed in captivity under favourable circumstances. Buffon speaks of a pair in France that nestled in a cask with "lots of sawdust"—no bad representative of a hole in a decayed tree—and produced and brought up their young for five or six successive years. Sticks were placed inside and outside of the barrel, that the gentleman might ascend and descend to the lady in the sawdust whenever he pleased. Nothing could be more amiable than his conduct to her; but it was absolutely necessary to go booted into the room if the visitor wished to go out of it with unwounded legs. Those who have felt the gripe of a parrot's bill will easily understand that it was not likely that any gentleman should enter the sanctuary in silk stockings a second time. Father Labat also gives an account of a pair whose loves were blessed with several broods in Paris.

An attempt has been made by some of the parrots in the brilliant collection of the Zoological Society of London to fulfil the great law of nature. We saw one pair, of the long-tailed division, very fussy, and busy, and nestifying, and we believe an egg or so made its appearance; "but," as Dr. Johnson said on a more solemn occasion, "nothing came of it."*

That parrots will live to a very great age there is no doubt. Le Vaillant saw one that had lived in captivity, or rather in a domesticated state for ninety-three years. When he saw the ancient it was in the *last stage of all.* It had been celebrated in its youth for its vigour, its docile and amiable disposition, the alert air with which it would fetch its master's slippers and call the servants,—above all, for its *flashes of merriment*;—and there it was, entirely decrepit, lethargic, its sight and memory gone, lingering out existence, and kept alive by biscuit soaked in Madeira wine. Somewhere about the age of sixty it began to lose its memory,

* Our recently lost George Coleman used to relate a circumstance connected with this subject, curiously illustrative of the manners and gaieties of his "youthful days." A Lady Reid, a celebrated ornithologist of that time, had, amongst a multitude of birds, a cock maccaw, which, according to her Ladyship's account, and to her infinite surprise, one day *laid an egg!* The story, told by her Ladyship with perfect gravity, and in the full persuasion of its truth, soon got about town. One day it reached the Cocoa-Tree, where, amongst others, Coleman and Francis North (afterwards fourth Earl of Guildford) were dining, at about three o'clock, in May or June; whence, upon obtaining this marvellous information, Coleman, North, and a third—I am not sure that it was not the late accomplished and amiable Sir George Beaumont—issued forth, and proceeded to the top of St. James's-street, where, having made for themselves trumpets of twisted paper for the purpose, they gave a flourish, and proclaimed aloud the astounding words, "Cock maccaws lay eggs!" and this was repeated in the front of White's; after which they returned to finish their wine,—their costume *then* being that which is now confined to the Court or full dress parties.—THEODORE E. HOOK.

and, instead of acquiring any new phrase, it forgot some of those it had learnt, and began to talk a jumble of words. At the age of sixty its moulting became irregular, the tail became yellow, and afterwards no change of plumage took place.

We will now draw upon the same Le Vaillant for the manners of another African species in a state of nature. The Robust Parrot (*Pionus Le Vaillantii* of Wagler, *Psittacus robustus* of Latham) haunts the woods of the eastern part of the continent as high as the thirty-second degree of latitude, in the breeding season only, leaving them at the approach of the rainy season, after it has brought up its young, for warmer skies. A hollow tree is, as usual, the receptacle for the eggs, which are four in number, and about the size of those of a pigeon: both parents share in the pleasing care of incubation. The nestlings are naked when they first quit the eggs, and are soon covered with a grayish down; but their plumage is not complete till six weeks have elapsed, and they keep to the nest a considerable time longer, during which period they are fed from the crop of the old ones, like the pigeons. When the periodical migration takes place, the flocks fly so high that they are lost to the sight, though their call-notes still reach the ear. The history of their day is not uninteresting. At dawn, the whole flock of the district assembles, and with much noise settles on one or more dead trees: there they display their wings to the first rays of the sun, whose rising they seem to hail. They are then drying their plumage charged with the night dews. As soon as they are warmed and dried, they separate into small breakfast parties, and fly in quest of their favourite cherry-like fruit, the stone of which they crack, and regale on the kernel. They like to linger over their breakfast, which continues till about ten or eleven o'clock: and the different parties then go to take their bath. The heat by this time is getting intense, and they retire to the deepest shades of the woods to take their siesta. There they remain in profound repose, and all is so still, that the traveller resting beneath a tree shall not hear a sound, though legions of parrots crowd the branches above him. The report of a gun instantly puts to flight the whole flock, screaming most discordantly.

When undisturbed, and their period of rest is terminated, they again disperse in small dinner parties, and, after the conclusion of the evening repast, there is a general assembly of all the flocks of the district, and a conversazione of considerable animation: this ended, away they all fly to take their second bath; and there they may be seen on the margin of the limpid pool, for no water that is not "clear as diamond-spark" will please them, scattering the water-drops over their plumage with their

heads and wings, and playfully rolling over each other in all the wantonness of an unchecked game of romps. This finished, they again seek the leafless trees on which they sat at sunrise, and dress and preen their feathers in its parting rays. Then, as the shades of evening close around, they fly off in pairs, each couple retiring to its own roosting-place, where they repose till dawn.

There is a smaller race of short-tailed parrots (*Agapornis*), the love-birds as they are called, from the affectionate attachment which exists between the male and female. There certainly are instances to the contrary, but the death of one is generally followed by that of the other. A glass placed at right angles with the perch has been used with success in reconciling the survivor to life, by the delusion produced by its own image.

The Lories,* in all their oriental richness, and the Cockatoos,† with their lofty crests and docile disposition, form two very interesting groups. The latter inhabit the woods of the Indian islands principally. In the former, the bill is comparatively weak; in the latter it is strong and robust. Most of our readers will remember the favourite cockatoo of George the Fourth; the bird was the very pink of politeness.

Other forms crowd on us, but we are warned. Our eye has just fallen on a pretty drawing from one of the Pompeian arabesques, of a grasshopper in a car, driving a parakeet—true; we have been "speaking parrot" more than enough, and must refer those of our readers who are not by this time in a balmy state of oblivion, and who may wish to make their eyes acquainted with the varieties of this beautiful family, to their portraits by Barraband and by Lear, the Reynolds and the Lawrence of the *Psittacidæ*.

* Genus Lorius.

† Subfamily Plyctolophina, Vigors.

TURKEYS.

"——Man, cursed man, on turkeys preys,
And Christmas shortens all our days.
Sometimes with oysters we combine,
Sometimes assist the sav'ry chine,
From the low peasant to the lord
The turkey smokes on every board."

GAY'S FABLES.

MERCY on us! turkey again! We grant the infliction. All the world has *supped full* of turkey. We are aware that the martyr who reads these lines may have been very recently and very intimately acquainted with the bird plain roasted, boiled, grilled, devilled—*aux truffes et à la broche—en daube*—as a galantine, as a blanquette, and as a marinade; that he has probably not omitted to amuse himself with the *cuisses et ailes à la sauce Robert*, and with the *ailerons piqués et glacés, en haricots, en fricassée de poulets, à la Sainte-Ménéhoulde, en chipolata ou à la financière*, and *en matelotte*—to say nothing of playing with the remains of the goodly fowl served as a *hachis à la reine*. One word more only on this part of the subject, as advice for the future to neophytes: it is given with all the oracular gravity that distinguishes a high priest of Comus. "Quand il est gras et dans la nouveauté, on le sert à la broche, piqué ou bardé. Quand il est vieux, on ne l'emploie que pour daube ou galantine à la gelée. La dinde est plus délicate que le dindon." All this we devoutly admit—to this amiable dictation of *Le Cuisinier des Cuisiniers* we bow; but when the great gastronomer asserts *ex cathedrâ*, that we owe this bird to the Jesuits, *qui l'ont apporté de l'Inde en Europe*, we, with all humility, but with modest firmness, demur to his natural history. The eloquent and learned author of *Tabella cibaria*, though he leaves their origin in doubt, says that turkeys were known in Europe before the institution of Loyola's order.

But whence was the turkey imported into Britain—into Europe—and thence spread over a great portion of the globe? "Ceux

qui pensent que les Cocs d'Inde n'ayent ésté cogneuz des anciens sont trompéz. Car Varro, Columelle, et Pline monstrent evidemment qu'ils estoyent de leur temps aussi communs es mestairies Romaines, qu'ils sont maintenant es nostres : lesquels ils nommoyent de nom Grec *Meleagrides* et de nom Latin *Gibberas*, &c. Varro dit en ceste sorte, *Gibberæ quas Meleagrides Græci appellant*, &c. Ceste chose est conforme à ce que Pline en éscrit au vingt-sixièsme chapitre du dixièsme livre de l'histoire naturelle. *Meleagrides* (dit il) *hoc est Gallinarum genus Gibberum variis sparsum plumis*, &c. Pourquoy il est facile à prouver que nostre Coc d'Inde est *Gibbera Gallina*, ou *Meleagris*." These be bold words: they come, too, from that father of ornithology, Pierre Belon du Mans, and he who wrote them was a man who saw through more than one fable that had passed current down to his time. Moreover, Aldrovandi and others speak, if possible, still more determinedly. But, as we once heard an advocate compendiously say, when hard pressed by a host of adverse cases, which were not very good law—they are all wrong together. Take our word for it, reader, Apicius never tasted a turkey: that excellent bird never graced the Apollo chamber of Lucullus; nor could all the wealth, nor all the power of the Cæsars have placed one on the Imperial board. The *Meleagris* of the ancients was the guinea-hen of our poultry-—"Simple Susan's" guinea-hen.

If any one doubt this, let him read the description of Athenæus, and give us his attention for a few minutes. Taking Clitus Milesius, a disciple of Aristotle, as his guide, Athenæus notices the small and naked head, the hard crest surmounting it like a peg or nail, the small gills hanging from the cheeks, the peculiarly spotted plumage, the spurless legs, and the similarity of the sexes.* The descriptions of Varro† and Pliny‡ are equally conclusive. To go into a detail of all the worthies who drew their pens upon each side of this question, which has caused so much ink-shed, would be tedious; the notice of one or two will suffice. "That these birds," says Willughby, "were the Meleagrides of the ancients, as also their Gallinæ Africanæ, and Numidicæ guttatæ, Aldrovandus takes much pains to prove. In England they are called Turkeys, because they are thought to have been first brought to us out of Turkey."§ Ray knew better, and, in his Synopsis, indicated the native country of the bird. But the progress of a debate which has long been settled is not very entertaining: and those who would wish to see the case well argued are referred to Pennant, who, bringing much learning, and an

* Deipn. 655.
† Lib. III. c. 9.
‡ Hist. Mund. Lib. x. c. 62.
§ Ornithology, p. 158.

ample knowledge of natural history to the discussion, may be considered as having given the *coup de grace* to the antiquarian theory. Daines Barrington was the last writer of any note who supported that theory; and though he makes a tolerably good fight, it is, after all, a paradoxical fight, and he seems to be arguing for victory, not truth. The Indian bird mentioned by Ælian was most probably one of the peacocks. The question is now set at rest. The turkey is one of the many good things that we owe to America.

In the "Perfect Description of Virginia," a small pamphlet in quarto (1649).—"With the manner how the Emperor Nichotowance came to Sir William Berckley, attended with five petty kings, to doe homage, and bring tribute to King CHARLES. With his solemne protestation, that the sun and moon should lose their lights, before he (or his people in the country) should prove disloyall, but ever to keepe faith and allegiance to King CHARLES;"—it is certified that they (the colonists) have "for poultry, hens, turkeys, ducks, geese, without number;" and in the catalogue of "Beasts, Birds, Fish, and Trees" at the end of the book, we find—"Wilde turkies, some weighing sixtie pound weight." The pamphlet was evidently written to encourage emigration and loyalty, and the writer may have put the weight of his turkeys rather high; but that the wild turkey grows to a large size there is no doubt.

Lawson set out on his voyage to Carolina in 1700. Soon after starting from Charlestown we find the following paragraph:—

"Tuesday morning we set towards the Congerees, leaving the Indian guide Scipio,"—not Africanus,—"drunk among the Santee Indians,"—jolly fellow!—"We went ten miles out of our way to head a great swamp, the freshes having filled them all with such great quantities of water, that the usual paths were rendered impassable. We met in our way with an Indian hut, where we were entertained with a fat boil'd goose, venison, racoon, and ground nuts. We made but little stay; about noon we passed by several large savannahs, wherein is curious ranges for cattle, being green all the year; they were plentifully stor'd with cranes, geese, &c., and the adjacent woods with great flocks of turkeys." We will follow the worthy Lawson into one of the natural turkey preserves, as he will give the reader some idea of the localities of these birds; nor is the quaint language of the narrative unpleasant:—"Next morning very early, we waded thro' the savannah, the path lying there; and about ten o'clock came to a hunting quarter of a great many Santees: they made us all welcome; showing a great deal of joy at our coming, giving us barbacu'd turkeys, bear's oil, and venison. Here we hired *Santee*

Jack (a good hunter, and a well-humour'd fellow), to be our pilot to the Congeree Indians; we gave him a Stroud-water-blew, to make his wife an Indian petticoat, who went with her husband. After two hours' refreshment, we went on, and got that day about twenty miles; we lay by a small swift run of water, which was pav'd at the bottom with a sort of stone much like to Tripoli, and so light that I fancy'd it would precipitate in no stream but where it naturally grew. The weather was very cold, the winds holding northerly. We made ourselves as merry as we could, having a good supper with the scraps of the venison we had given us by the Indians, having killed three teal and a possum; which medley altogether made a curious ragoo.

"This day all of us had a mind to have rested, but the Indian was much against it, alleging, that the place we lay at was not good to hunt in, telling us, if we would go on, by noon he would bring us to a more convenient place; so we moved forwards, and about twelve a clock came to the most amazing prospect I had seen since I had been in Carolina: we travelled by a swamp side, which swamp I believe to be no less than twenty miles over, the other side being as far as I could well discern, there appearing great ridges of mountains, bearing from us W.N.W. One Alp, with a top like a sugar-loaf, advanced its head above all the rest very considerably: the day was very serene, which gave us the advantage of seeing a long way; these mountains were cloth'd all over with trees, which seem'd to us to be very large timbers.

"At the sight of this fair prospect, we stay'd all night; our Indian going about half an hour before us, had provided three fat turkeys e'er we got up to him.

"The swamp I now spoke of is not a miry bog, as others generally are, but you go down to it thro' a steep bank, at the foot of which begins this valley, where you may go dry for perhaps 200 yards, then you meet with a small brook or run of water about two or three feet deep, then dry land for such another space, so another brook thus continuing. The land in this Percoarson, or valley, being extraordinary rich, and the runs of water well stor'd with fowl. It is the head of one of the branches of Santee River; but a farther discovery time would not permit: only one thing is very remarkable, there growing all over this swamp, a tall, lofty, bay-tree, but is not the same as in England, these being in their verdure all the winter long; which appears here when you stand on the ridge (where our path lay), as if it were one pleasant green field, and as even as a bowling-green to the eye of the beholder, being hemm'd in on one side with these ledges of vast high mountains.

"Viewing the land here, we found an extraordinary rich black

mould, and some of a copper colour, both sorts very good. The land in some places is much burthen'd with iron-stone, here being great store of it seemingly very good; the eviling springs, which are many in these parts, issuing out of the rocks. When we were all asleep, in the beginning of the night, we were awaken'd with the dismall'st and most hideous noise that ever pierc'd my ears: this sudden surprizal incapacitated us of guessing what this threatning noise might proceed from; but our Indian pilot (who knew these parts very well) acquainted us, that it was customary to hear such musick along that swamp-side, there being endless numbers of panthers, tygers, wolves, and other beasts of prey, which take this swamp for their abode in the day, coming in whole droves to hunt the deer in the night, making this frightful ditty 'till day appears, then all is still as in other places.

"The next day it prov'd a small drisly rain, which is rare, there happening not the tenth part of foggy-falling weather towards these mountains, as visits those parts. Near the sea-board, the Indian kill'd fifteen turkeys this day, there coming out of the swamp (about sun-rising) flocks of these fowl, containing several hundreds in a gang, who feed upon the acorns, it being most oak that grow in these woods. There are but very few pines in those quarters.

"Early the next morning, we set forward for the Congeree Indians, parting with that delicious prospect. By the way, our guide killed more turkeys, and two pol-cats, which he eat, esteeming them before fat turkeys. Some of the turkeys which we eat while we stay'd there, I believe, weigh'd no less than forty pounds.

"The land we pass'd over this day, was most of it good, and the worst passable. At night we kill'd a possum, being cloy'd with turkeys, made a dish of that, which tasted much between young pork and veal; their fat being as white as any I ever saw.

"Our Indian this day kill'd good store of provision with his gun: he always shot with a single ball, missing but two shoots in about forty, they being curious artists in managing a gun, to make it carry either ball or shot true. When they have bought a piece, and find it to shoot any ways crooked, they take the barrel out of the stock, cutting a notch in a tree, wherein they set it streight, sometimes shooting away above 100 loads of ammunition before they bring the gun to shoot according to their mind. We took up our quarters by a fish-pond side; the pits in the woods that stand full of water naturally breed fish in them, in great quantities. We cook'd our supper, but having neither bread or salt, our fat turkeys began to be loathsome to us, although we

were never wanting of a good appetite, yet a continuance of one diet made us weary."*

Audubon says that the unsettled parts of the states of Ohio, Kentucky, Illinois, and Indiana, an immense extent of country to the north-west of these districts, upon the Mississippi and Missouri, and the vast regions drained by these rivers from their confluence to Louisiana, including the wooded parts of Arkansas, Tennessee, and Alabama, are the most abundantly supplied with the wild turkey. It is, he adds, less plentiful in Georgia and the Carolinas, becomes still scarcer in Virginia and Pennsylvania, and is now very rarely seen to the eastward of the last-mentioned States. In the course of his rambles through Long Island, the State of New York, and the country around the lakes, he did not meet with a single individual, although he was informed that some exist in those parts. They are still to be found along the whole line of the Alleghany Mountains, where they have become so wary as to be approached only with extreme difficulty, according to the same author, who, when in the Great Pine Forest in 1829, found a single feather that had been dropped from the tail of a female, but saw no bird of the kind. Farther eastward, he does not think they are now to be found.† Not much more than a century and a quarter has elapsed between the dates of these two accounts, and yet we see how much the area over which the species was formerly spread, is already circumscribed.

The following graphic description of the habits of the wild turkey, by the enthusiastic American ornithologist, will be read with interest:—

"The turkey is irregularly migratory, as well as irregularly gregarious. With reference to the first of these circumstances, I have to state that, whenever the *mast*‡ of one portion of the country happens greatly to exceed that of another, the turkeys are insensibly led towards that spot, by gradually meeting in their haunts with more fruit the nearer they advance towards the place where it is most plentiful. In this manner flock follows after flock, until one district is entirely deserted, while another is, as it were, overflowed by them. But as these migrations are irregular, and extend over a vast expanse of country, it is necessary that I should describe the manner in which they take place.

* A History of Carolina, &c. By John Lawson, Gent., Surveyor-General of North Carolina. London, 1714, small 4to. p. 25, et seq.

† Ornithological Biography. London, 1831, 8vo.

‡ In America the term *mast* is not confined to the fruit of the beech, but is used as a general name for all kinds of forest fruits, including even grapes and berries. (Audubon.)

"About the beginning of October, when scarcely any of the seeds and fruits have yet fallen from the trees, these birds assemble in flocks, and gradually move towards the rich bottom lands of the Ohio and Mississippi. The males, or as they are more commonly called, the *gobblers*, associate in parties of from ten to a hundred, and search for food apart from the females, while the latter are seen either advancing singly, each with its brood of young, then about two-thirds grown, or in connexion with other families, forming parties often amounting to seventy or eighty individuals, all intent on shunning the old cocks, which, even when the young birds have attained this size, will fight with, and often destroy them by repeated blows on the head. Old and young, however, all move in the same course, and on foot, unless their progress be interrupted by a river, or the hunter's dog force them to take wing. When they come upon a river, they betake themselves to the highest eminences, and there often remain a whole day, or sometimes two, as if for the purpose of consultation. During this time the males are heard *gobbling*, calling, and making much ado, and are seen strutting about, as if to raise their courage to a pitch befitting the emergency. Even the females and young assume something of the same pompous demeanour, spread out their tails, and run round each other, *purring* loudly, and performing extravagant leaps. At length, when the weather appears settled, and all around is quiet, the whole party mounts to the tops of the highest trees, whence, at a signal, consisting of a single *cluck*, given by a leader, the flock takes flight for the opposite shore. The old and fat birds easily get over, even should the river be a mile in breadth; but the younger and less robust frequently fall into the water,—not to be drowned, however, as might be imagined. They bring their wings close to their body, spread out their tail as a support, stretch forward their neck, and striking out their legs with great vigour, proceed rapidly towards the shore; on approaching which, should they find it too steep for landing, they cease their exertions for a few moments, float down the stream until they come to an accessible part, and by a violent effort, generally extricate themselves from the water. It is remarkable that, immediately after thus crossing a large stream, they ramble about for some time as if bewildered. In this state they fall an easy prey to the hunter.

"When the turkeys arrive in parts where the mast is abundant, they separate into smaller flocks, composed of birds of all ages and both sexes promiscuously mingled, and devour all before them. This happens about the middle of November. So gentle do they sometimes become after these long journeys, that they have been seen to approach the farm-houses, associate with the

domestic fowls, and enter the stables and corn-fields in quest of ood. In this way roaming about the forests and feeding chiefly on masts, they pass the autumn and part of the winter."*

In February—sweet St. Valentine!—the scene is changed. "The females separate and fly from the males. The latter strenuously pursue, and begin to gobble, or to utter notes of exultation. The sexes roost apart, but at no great distance from each other. When a female utters a call-note, all the gobblers within hearing return the sound, rolling note after note with as much rapidity as if they intended to emit the last and the first together, not with spread tail, as when fluttering round the females on the ground, or practising on the branches of the trees on which they have roosted for the night, but much in the manner of the domestic turkey when an unusual or unexpected noise elicits its singular hubbub. If the call of the female comes from the ground, all the males immediately fly towards the spot, and the moment they reach it, whether the hen be in sight or not, spread out and erect their tail, draw the head back on the shoulders, depress their wings with a quivering motion, and strut pompously about, emitting at the same time a succession of puffs from the lungs, and stopping now and then to listen and look. But whether they spy the female or not, they continue to puff and strut, moving with as much celerity as their ideas of ceremony seem to admit. While thus occupied the males often encounter each other, in which case desperate battles take place, ending in bloodshed, and often in the loss of many lives, the weaker falling under the repeated blows inflicted upon their heads by the stronger."†

This union of love and war, this ominous conjunction of Mars and Venus, seems to be a necessary condition of animal life. The females calmly look on and await the event of the struggle which is to be settled by the law of the strongest, who reaps the reward of his prowess. Thus a sturdy progeny is secured, and Nature does all in her power to prevent the species from dwindling.

In the delightful book last quoted there is a fund of turkey entertainment for any lover of natural history. There may he read how hens associate, probably for their mutual safety, deposit their eggs in the same nest, and rear their broods together, the common nest being watched by one of the females against the crow, the raven, and the pole-cat; how to prevent the effects of rainy weather, the mother, like a skilful physician, plucks the buds of the spice-wood bush and gives them to her young; how they are hunted with the slow turkey-hound, and how they are caught in pens; and how, of the numerous enemies of the wild turkey,

* Ornithological Biography, vol. i., p. 2. † Ibid, p. 3.

the most formidable, excepting man, are the lynx, the snowy owl, and the Virginian owl. None but an eye-witness could have described the following attack and defence:—

"When attacked by the two large species of owls above mentioned, they often effect their escape in a way which is somewhat remarkable. As turkeys usually roost in flocks on naked branches of trees, they are easily discovered by their enemies the owls, which, on silent wing, approach and hover around them, for the purpose of reconnoitring. This, however, is rarely done without being discovered, and a single *cluck* from one of the turkeys announces to the whole party the approach of the murderer. They instantly start upon their legs, and watch the motions of the owl, which, selecting one as its victim, comes down upon it like an arrow, and would inevitably secure the turkey, did not the latter at that moment lower its head, stoop, and spread its tail in an inverted manner over its back, by which action the aggressor is met by a smooth inclined plane, along which it glances without hurting the turkey; immediately after which the latter drops to the ground, and thus escapes merely with the loss of a few feathers."*

But *who* imported the bird into Europe, and *when* was it introduced?

These are more difficult questions.

We do not find the turkey in the list of the goodly provision made for the intronization of George Nevell, Archbishop of York, in the reign of Edward IV.; nor does it appear in the "Regulations of the Household of the fifth Earl of Northumberland begun in 1512," but long before the date of the oldest of the books on Virginia and Carolina above mentioned, the bird was common in the farm-yards of Europe.

"Sebastian Cabot," or "Sebastian Gabato," a Genoese son, born in Bristow, *sett forth* from that town, *and made great discoveries*, in the thirteenth year of Henry VII.'s reign, that is, in 1498. Other calendars make the time 1499 or 1497.† But the voyage was deemed unprofitable, and we find that the king, in 1500, probably stimulated by the success of the Spaniards and Portuguese, granted letters patent to Richard Warde, John Thomas, and John Farnandus, empowering them to make voyages of discovery and conquest. Nothing, however, seems to have been done; and again letters patent, A.D. 1502, were granted to the same persons and others, containing a licence in the king's name

* Ornithological Biography, I., p. 8.

† Sebastian, together with his two brothers, had been previously included in a patent bearing date the 5th of March, 1496, granted by Henry VII. to his father John, for the discovery and conquest of unknown lands.

"to settle in places yet unknown, to take possession of lands, towns, islands, castles, fortresses, &c. belonging to Gentiles and infidels," &c. It is a matter of doubt whether any voyages were undertaken in consequence of these last letters of licence. But though Cabot's voyage was deemed unprofitable, his coast discoveries were very extensive, and it is by no means impossible that the turkey might have been introduced into England by his or some of the subsequent expeditions.

As for the often repeated couplet given by Baker—

> "Turkeys, carps, hoppes, piccarel, and beer,
> Came into Englánd all in one year—"

that is about the fifteenth of Henry VIII. (1524): there is no reliance to be placed upon it, as far at least as the fish is concerned; for Dame Juliana Barnes, or Berners, Prioress of Sopewell Nunnery, mentions, in the Boke of St. Alban's, printed by Wynkyn de Worde in 1496,* the carp as a "deyntous fisshe;" and the price of pike or pickerel was the subject of legal regulation in the time of our first Edward.

Mexico was discovered by Grijalva in the year 1518, and we soon after find a description of the turkey as one of the productions of the country by Gomarra and Hernandez, the latter of whom gives its Mexican name "Huexolotl," and makes mention of the wild birds as well as the tame. Oviedo, whose work was published at Toledo in 1526, describes the turkey well, as a kind of peacock of New Spain which had been carried over to the islands and the Spanish Main, and was about the houses of the Christian inhabitants; so that it is evident that, when Oviedo wrote, the bird had been domesticated. Heresbach states that they were brought into Germany about 1530, and Barnaby Googe (1614) declares that "those outlandish birds called ginny-cocks and turkey-cocks, before the yeare of our Lord 1530 were not seen with us." But Barnaby had without doubt Heresbach's book before him when he wrote; and, indeed, the observations of the German author may be traced throughout the pages of the English writer on husbandry.

Pierre Gilles, in his additions to Ælian (1535), gives a most accurate description of the turkey, as being then in Europe. Pierre had not at that time been farther from his native country than Venice, and he says that he had seen it, and that it was brought from the New World.

In 1541 we find a constitution of Archbishop Cranmer directing that of such large fowls as cranes, swans, and turkey-cocks, there

* The first edition is said to have been printed in 1481, at St. Alban's.

should be but one dish; and we find the bird mentioned as no great rarity at the inauguration dinner of the serjeants-at-law in 1555. The learned brothers had upon that occasion two turkeys and four turkey chicks charged at four shillings each, swans and cranes being valued at ten shillings, and capons at half-a-crown. Champier, who is supposed to have written his treatise "De Re Cibaria" thirty years before it was published, (the publication was in 1560,) notices them as having been brought but a few years back from the newly-discovered Indian islands. Zanoni quotes a sumptuary law of Venice, made in 1557, prescribing the tables at which these birds might be served. The municipality of Amiens presented in the year 1566 twelve turkeys to the king; and Anderson, in his "History of Commerce," says that they were first eaten in France at his majesty's* marriage in 1570. This assertion of Anderson does not seem to rest on any foundation, and we know that in 1573, they had become so common in England that they formed part of the usual Christmas fare at a farmer's table. Tusser, in his "Five Hundreth Points of Good Husbandry," remarks this, and also that they are *ill neighbors* to peason and hops. Hakluyt, in 1582, mentions "turkey-cocks and hennes" as having been brought into England *about fifty years past.*

Upon the whole evidence, a verdict may, in our opinion, be given in favour of the Spaniards as the importers of this great addition to our poultry-yards; and we think that its introduction into this country must have taken place about the year 1530, and into other parts of Europe very nearly at the same time. Pennant, indeed, says, "It was first seen in France in the reign of Francis I., and in England in that of Henry VIII. By the date of the reign of these monarchs the first birds of this kind must have been brought from Mexico, whose conquest was completed A.D. 1521, the short-lived colony of the French in Florida not being attempted before 1562, nor our more successful one in Virginia till 1585, when both these monarchs were in their graves."

The weight to which this bird will attain has been stated to be enormous: we have given some of these statements, and there has been doubtless a good deal of exaggeration. But even now the wild birds arrive at a great size. Mr. Audubon gives from 15lb. to 18lb. as the average, and mentions one in the Louisville market which weighed 36lb., and whose breast-tuft was upwards of a foot long. The length of the cock figured by Audubon was four feet and an inch, and the expanse of the wings five feet eight

* Charles IX.

inches. The Prince of Musignano,* who has given a very interesting account of the habits of the wild turkey, says that birds of 30lb. weight are not rare, and that he had ascertained the existence of some which weighed 40lb. The average weight of a wild hen appears to be about 9lb.; but in the strawberry season, when they are so fat as to burst with the fall after being shot, they occasionally reach 13lb.

But why is the bird called turkey or turky?† Every one has observed the changing hue of his wattle from red to blue when he is excited. In the small edition of Belon (1557) there is a cut of a triad of these birds, under the title of "Gallo d'India, Coq d'Inde" (Dinde Dindon), and beneath is the following quatrain:—

> "Quand à orgueuil ce coq au Paon approche,
> Et fait sa queue en roue comme luy,
> Les Barbillons et creste d'iceluy
> Sont de couleur à l'azurée proche."

This "azurée" is very like the Turquois or Turquoise—*Gemma Turcica*—and is eminently characteristic of the bird. We do not presume to give this as a solution, but merely mention the hint for lack of a better.

Willughby and others notice the anger into which the turkey is thrown by the display of anything dyed of a red colour; but that is not the only hue that provokes it, if we may believe a catalogue of pictures printed in Germany for the special benefit of the English; for there, we remember, was the following lot:—"A Turkish Cook inflamed to choler by a Blackzer Boy." Whether the writer had ever heard or read of Garrick's performance in the court-yard, with Sambo for audience, we know not: but from other internal evidence we suspect that it was a *bond fide* catalogue, written undoubtedly in *choice* English. For instance, another picture was thus announced—"Nymphs bathing into a mountainous landskip: Satyrs snooks about 'em."

But to return to our turkey. The author of "Tabella Cibaria" proves it upon the bird that it is "so stupid or timorous that if you balance a bit of straw on his head, or draw a line of chalk on the ground from his beak, he fancies himself so loaded or so bound, that he will remain in the same position till hunger forces

* Charles Lucien Bonaparte, now Prince of Canino and Musignano.

† In Lawson's time *Coona* was the name for a turkey in the language of the Tuskeruro Indians, and *Yauta* in that of the Waccons or Woccons. The same author, speaking of the Indians, says, "They name the months very agreeably, as one is the herring-month, another the strawberry-month, another the mulberry-month. Others name them by the trees that blossom; especially the dogwood-tree; or they say, 'We will return when turkey-cocks gobble,' that is, in March and April."

him to move. We made the experiment." We never did; but we doubt it not, though we cannot accept it as proof of stupidity. How much wit may be necessary to balance a straw may be doubtful; but gallant chanticleer has never been charged either with fear or folly, and yet you have only to take him from his perch, place him on the table by candlelight, hold his beak down to the table, and draw a line with chalk from it so as to catch his eye, and there the bird will remain spell-bound, till a bystander rubbing out the line, or diverting his attention from it, breaks the charm. Many a fowl have we thus fascinated in our boyish days.

Whatever may be the character for stupidity that the turkey has earned for itself in a domestic state, no such charge can be established against it in its native woods, where its vigilance and cunning are acknowledged by the hunters to their cost. Even in the poultry-yard the attentions of the turkey-cock to the female and the young, aye, and the courage with which he will defend the brood from dogs and other intruders, have been noticed. He has been known to take the sole charge of the brood upon himself, and to sit upon the eggs. The editor of the pretty and interesting volume on Gallinaceous birds* says, "I once knew it take place upon two addled eggs, which the hen had long persevered upon, and upon which he (the turkey-cock) kept his place a fortnight." This was certainly being paternal overmuch.

We must insert the following anecdote of the sagacity of a half-reclaimed bird, from the pen of Audubon, by way of set-off.

"While at Henderson, on the Ohio, I had, among many other wild birds, a fine male turkey, which had been reared from its earliest youth under my care, it having been caught by me when probably not more than two or three days old. It became so tame that it would follow any person who called it, and was the favourite of the little village. Yet it would never roost with the tame turkeys, but regularly betook itself at night to the roof of the house, where it remained until dawn. When two years old it began to fly to the woods, where it remained for a considerable part of the day, to return to the enclosure as night approached. It continued this practice until the following spring, when I saw it several times fly from its roosting-place to the top of a high cotton-tree, on the bank of the Ohio, from which, after resting a little; it would sail to the opposite shore, the river being there nearly half a mile wide, and return towards night. One morning I saw it fly off, at a very early hour, to the woods, in another

* Naturalist's Library—Ornithology, vol. III.

direction, and took no particular notice of the circumstance. Several days elapsed, but the bird did not return. I was going towards some lakes near Green River, to shoot, when, having walked about five miles, I saw a fine large gobbler cross the path before me, moving leisurely along. Turkeys being then in prime condition for the table, I ordered my dog to chase it and put it up. The animal went off with great rapidity, and, as it approached the turkey, I saw, with surprise, that the latter paid little attention. Juno was on the point of seizing it, when she suddenly stopped, and turned her head towards me., I hastened to them, but you may easily conceive my surprise when I saw my own favourite bird, and discovered that it had recognised the dog, and would not fly from it; although the sight of a strange dog would have caused it to run off at once. A friend of mine happening to be in search of a wounded deer, took the bird on his saddle before him, and carried it home for me. The following spring it was accidentally shot, having been taken for a wild bird, and brought to me on being recognised by the red riband which it had around its neck. Pray, reader, by what word will you designate the recognition made by my favourite turkey of a dog which had been long associated with it in the yard and grounds? Was it the result of instinct or of reason—an unconsciously revived impression, or the act of an intelligent mind?" *A question to be asked.*

But how many of our readers are there who have never seen a wild turkey; and of those who have not, how few may care to read a technical description of the bird! and yet to some it may be interesting. The Prince of Musignano, in his "Continuation of Wilson's North American Ornithology," was the first who gave an authentic figure of the wild turkey; and nearly at the same time (about eleven years ago) M. Vieillot published one in his "Galerie," from a specimen in the Paris Museum. But it is to the magnificent work of Audubon, "The Birds of America," that we owe a perfect representation of the male, the female, and the young, upon a grand scale, and with a minuteness of accuracy that an ornithologist alone can appreciate, though every one must be struck with the truth of the life-like portraits. We are aware that, prior to the appearance of the above-mentioned works, there were figures—for instance, those introduced into a landscape in the account of De Laudonière's Voyage to Florida, in De Bry's Collection, and Brickell's, in his Natural History of North Carolina—but these are not only apocryphal, if they are to be considered as unadulterated representatives of the wild bird, but too imperfect to be available.

The following description, from the pen of the late lamented

Mr. Bennett, appears to us to embody the best parts of all that have appeared, and we accordingly select it.

"Those who have seen only the domesticated bird can form but a faint idea of its beauty in a state of nature. When fully grown, the male wild turkey measures nearly four feet in length, and more than five in the expanse of its wings. Its head, which is very small in proportion to its body, is covered with a naked, blueish skin, which is continued over the upper half of its neck. On this skin are placed a number of wart-like elevations, red on the upper portion and whitish below, interspersed with a few scattered blackish hairs. On the under part of the neck, the skin is flaccid and membranous, and extends downwards, in the shape of large wattles. From the base of the bill, at its junction with the forehead, rises a wrinkled, conical, fleshy protuberance, with a pencil of hairs at the tip. This protuberance, when the bird is at rest, does not exceed an inch and a half in length, but on any excitement becomes elongated to such an extent as to cover the bill entirely, and to depend below it for several inches. The lower part of the neck, at its junction with the breast, is ornamented by a singular tuft of black rigid hairs, separating themselves from the feathers, and reaching as much as nine inches in length. The feathers of the body are long and truncated, and generally speaking may each be subdivided into four parts. Their base is formed by a light fuliginous down, which is followed by a dusky portion. This again is succeeded by a broad shining metallic band, changing to copper colour or bronze, to violet or purple, according to the incidence of the light; while the tip is formed by a narrow black velvety band, which last is wanting on the neck and breast. From this disposition of the colours results a most beautiful changeable metallic gloss over the whole body of the bird, which is however less marked on the lower part of the back and tail-coverts.

"The wings, which scarcely extend beyond the base of the tail, are convex and rounded. They are furnished with twenty-eight quill-feathers: the primaries are plain blackish, banded with white, while the secondaries have the relative extent of these markings so reversed that they may be described as white banded with blackish, and tinged, especially towards the back, with brownish yellow. The tail measures more than fifteen inches in length, is rounded at the extremity, and consists of eighteen broad feathers, which, when expanded and elevated, assume the form of a fan. It is brown, mottled with black, and crossed by numerous narrow undulating lines of the same. Near the tip is a broad black band, then follows a short mottled portion, and lastly a

broad dingy yellowish band. The feet are robust, have blunt spurs about an inch in length, and are of a red colour, with blackish margins to the scales, and claws of the same dusky hue. The bill is reddish and horn-coloured at the tip; and the irides are dark brown.

"The female is considerably smaller, not exceeding three feet and a quarter in length. Her bill and legs are less robust, the latter without any rudiment of a spur; and her irides similar to those of the male. Her head and neck are less denuded, being covered by short decomposed feathers of a dirty grey. Those of the back of the neck have brownish tips, producing a longitudinal band on that part. The caruncle on the forehead is short and incapable of elongation; and the fasciculus on the breast is not always present. The prevailing tinge of the plumage is dusky grey, each feather having a metallic band, and a greyish terminal fringe. On the feathers of the neck, and under surface, the black band is for the most part obliterated. All the parts, without exception, are duller than those of the male; less white exists on the primary wing-feathers, and the secondaries are entirely destitute of bands. The tail is similar in colour to that of the male.

"Until the naked membrane acquires its tinge of red, it is not easy to distinguish between the two sexes; but on the approach of the first winter, the young males show a rudiment of the tuft of hairs upon the breast, consisting at first of a mere tubercle: in the second year, the tuft is about three inches long; and in the third the bird attains its adult form, although it certainly continues to increase in size and beauty for several years. Females have their full size and colouring at the end of four years: they then possess the pectoral fascicle, four or five inches in length, but much thinner than in the male. This appendage is more frequently observed, and is acquired at an earlier period of life in the wild than in the domestic female.

"The wild turkey has been found native from the north-western territory of the United States to the Isthmus of Panama. Towards the north, Canada appears to be the limit of its range; but from this country, as well as from the more densely peopled parts of the American Union, where it was once extremely abundant, it is gradually disappearing before the encroachments of the Lord of the Creation. To the west, the Rocky Mountains seem to form a barrier that it has never passed, if, indeed, it has reached them; but the wooded districts of the western States are still plentifully supplied with this valuable game, which there forms an important part of the subsistence of the hunter and the traveller. In the north-eastern States it is now become extremely rare although it is still occasionally found in the mountainous

parts of New Jersey and Pennsylvania; while in the south, Florida, Georgia, and the Carolinas, where, three centuries ago, it was most plentiful, have still a small supply."

The varied plumage of the bird in the domesticated state is well known to every one; and in no species is that sure mark of subjection to man more strongly seen. Every gradation of colour, from its original bronze, passing into buff, and, in many instances, into pure white, may be observed in these strutting denizens of our farm-yards.

But handsome as is the wild turkey (*Meleagris Gallopavo*), which has been our theme, there is yet another wild American species, (*Meleagris ocellata*), first described by Cuvier, from a bird which was once English, but is now the property of the French Government, far more beautiful.

The crew of a vessel who were cutting wood in the Bay of Honduras saw three of these noble birds, and succeeded in taking one alive. It was sent to the late Sir Henry Halford; but an accident, whilst it was yet on the Thames, deprived it of life, and Sir Henry presented it to Mr. Bullock, whose museum, then in the Egyptian Hall, was the place of deposit for the most valuable subjects of Natural History. When that rich collection was dispersed, this unique specimen was suffered to leave the country with a multitude of other rarities, which are, even now, the stars of foreign establishments. It was heart-breaking to see one fine lot knocked down after another, and to learn that it was become the property of our more enlightened and more liberal rivals, and no longer to remain on English ground. M. Temminck has given a good figure of it in the "Planches Coloriées;" and the following is, in great part, from Sir William Jardine's description, which was taken from that of Temminck.

In size it is nearly equal to the common turkey, but the tail is not so ample. The bill is of the same form, and the base with a caruncle, which is apparently capable of the same dilatations and contractions with that of its congener. The head and two-thirds of the neck are naked, and appear of the same livid colour, but without any trace of the fleshy tubercles on the lower part which are so prominent a feature in the physiognomy of the common turkey: the only appearance of any is five or six above each eye, five upon the centre of the crown, and, upon the side of the neck, six or seven, arranged in a line above each other, and at nearly equal distances. Upon the breast there was no trace of the tuft of hair; but the plumage was somewhat damaged, and the examination of other specimens must determine whether this character is also present in the species under consideration. The feathers are rounded at the ends; those of the lower part of the

neck, the upper part of the back, the scapulars, and the lower part, are of a metallic green or bronze hue, terminated by two bands, one black, and that next the tip of a golden bronze. On the other parts of the back, the distribution of the colours is the same; but, towards the tail coverts, the tints become comparatively vivid, the bronzed hues changing into rich blue or emerald-green, according to the incidence of the rays of light, and the band next the tip becoming broader and more golden. Upon the rump, red becomes mingled with the tints, so as to remind the observer of the throat of the ruby-crested humming-bird. A band of deep velvety black separates the blue from this border, and makes the brightness of the latter more striking. The hidden part of each feather is gray, mottled with black: upon the tail and upper coverts this gray part becomes apparent, and the marks take the form of subcircular bars, two of which surrounding the blue band give to each feather an ocellated appearance. From the arrangement of the tail-coverts and the lower feathers of the rump there are four rows with these ocellated tips, where the gray basal portion of the feathers is visible, combining very chastely with the more vivid colour, and keeping down its lustre. The tail is rounded, and consists of fourteen feathers. The lower parts of the body are banded with bronze, black, and green; but they want the brilliancy of the upper plumage. The quills and bastard-wing are black, edged obliquely with white, which almost entirely occupies the outer margin of the first. The outer webs of the secondaries are of a pure white, the central bands not appearing when the wings are closed: the uppermost are blotched in the centre with black, lustrous with green; and this blotching, as the feathers shorten, extends more over their surface, leaving the edge only of the last white. The greater coverts are of a chestnut colour; and the feet and legs are of a fine lake, or purplish red.

We have given this description, not without hope that it may perchance meet the eye of some one who has the will as well as the power to bring the magnificent bird to this country. What has been done once may be done again: and we trust that, next time, it will be done effectually. With the naturalized poultry from Asia, Africa, and America before our eyes, there cannot exist a doubt that the *Ocellated Turkey* would thrive with us. The benefactor who conferred the domestic turkey upon Europe is unknown. He who succeeds in naturalizing the ocellated turkey will have the merit of introducing the most beautiful addition to our parks and homesteads—to say nothing of its utility—since the importation of the peacock; and, in these days of record, his name will not be forgotten.

February, 1837.

WILD SWANS.

" The swans on sweet St. Mary's lake
Float double, swan and shadow."

WORDSWORTH.

How simply and beautifully true to nature is this musical picture! We behold the tranquil lake-scenery of the source of the Yarrow as clearly as Ruysdael or Nasmyth—the names may be mingled—could have impressed it on the eye of flesh.

Linnæus has, somewhat profanely, placed the swan among the *Anseres*. Sacred to Apollo, it has been celebrated as the bird of the muses in almost all languages from Homer and Callimachus,—whose charming lines make the notes of the swans that flew singing sweetly round Delos absolutely audible,—to him who wrote yesterday. In Retzsch's exquisite designs for "Pegasus im Joch"*—not the only ethereal creature doomed to drag on earth the basest materials amid the barking of curs, and hissing of geese—the lake surrounding the lonely island whereon the altar to Schiller is erected, is sacred to him and the swans alone.

Venus and her son claimed the bird as well as Apollo:

" See the chariot at hand here of Love,
Wherein my lady rideth!
Each that draws is a swan or a dove,
And well the car Love guideth.
As she goes, all hearts do duty
Unto her beauty;
And enamour'd, do wish, so they might
But enjoy such a sight,
That they still were to run by her side,
Through swords, through seas, whither she would ride."

* Pegasus in harness.

Well they might.

" Have you seen but a bright lily grow
Before rude hands have touch'd it?
Have you mark'd but the fall o' the snow
Before the soil hath smutch'd it?
Have you felt the wool of the bever?
Or swan's down ever?
Or have smelt o' the bud of the briar?
Or the nard in the fire?
Or have tasted the bag of the bee?
O, so white! O, so soft! O, so sweet is she!"*

Rare Ben! But we must be zoological.

Let us examine the bony frame-work of a swan. What an admirable piece of animated ship-building it is! How the ribs rise from the broad and keeled sternum to support the lengthened pelvis and, the broad back which form a goodly solid deck for the young cygnets to rest on under the elevated, arched, and sail-like wings of the parent;† and how the twenty-five vertebræ of the neck rise into a noble ornamental prow, crowned with the graceful head. How skilfully are the oary legs and feet fitted—just where their strokes would be best brought to bear for the purpose of putting the living galley in motion! It is a work worthy of the great artificer.

The species of this elegant genus are now well defined, and we proceed to notice them.

1. The Elk, Hooper, or Whistling Swan, *Cygnus ferus* of Linnæus, *Cygnus musicus* of Bechstein.

This pure white-plumaged swan, with the exception of a slight buff tinge on the upper part of the head, has the anterior part of the bill black and depressed, but it is squared at the base, and yellow, which last hue is extended forward along each edge of the upper mandible, beyond the opening of the nostrils, which are black. Yellow also occupies the space between the base of the upper mandible and the eye, and colours the posterior portion of the lower mandible. There is no caruncle or "berry," as the Swanherds call it. The iris of the eye is brown, and the feet are black.

When a fine male hooper is stretched out, he will measure, neck and all, about five feet, and the expanded wings eight feet from tip to tip. The female is not so large, and her neck is more slender. It should be borne in mind, however, that the hoopers

* " Underwoods. A Celebration of Charis. Her Triumph."—Horsley has married these bright verses to rich harmony.

† See the " Fragment" headed " A Word to Anglers" p. 168.

vary much in weight. Colonel Hawker, in the winter of 1838, killed them from thirteen to twenty-one pounds: they have been known to weigh twenty-four.

Our islands only see the hooper as a winter visiter from the north. Its summer retreats are Iceland, Scandinavia, and the inhospitable regions within the arctic circle. As they fly in wedge-like figure, uttering their repeated cry of "hoop, hoop" in concert, their united notes fall not unmusically on the ear of the wayfarer below.

The Icelander, who hears in their loud clarions the knell of winter, and hails the shining aërial band as the heralds of summer, compares their joint melody to the notes of a viol.

The wind-instrument which produces these sounds, is a curious piece of animal mechanism. The cylindrical tracheal tube passes down the neck, and then descends between the forks of the merry-thought to the level of the keel of the breast-bone, which is double; and this windpipe, after traversing nearly the whole length of the keel between the two plates, is doubled back as it were upon itself, and passing forwards, upwards, and backwards again, ends in a vertical divaricating bone, whence two long bronchial tubes diverge, each into their respective lobe of the lungs. In short, our winged musician carries a French-horn in his chest, but it is not quite so mëlodious as Puzzi's. In the females and young males, the windpipe is not inserted so deeply.

Like its congeners, the hooper feeds on water-plants and insects; but the vegetable diet greatly prevails. Leaves, flags, rushes, and other spoils of the marshy Flora form his ample nest; and his loves are generally blessed with six or seven whitish eggs, each some four inches and a half long, and about two inches and three-quarters broad, washed with a yellowish green tinge.

The hooper breeds in captivity, soon becomes reconciled to a state of half-domestication, and is now far from uncommon on our ornamental sheets of water. He is a bird of high courage, and fights stoutly *pro aris et focis*.

On a glorious half-spring, half-summer morning, a little family of newly-hatched cygnets were basking in their greyish downy coats on the banks of one of the islands in the gardens of the Zoological Society, drinking in the rays at every pore, with half-closed eyes and outstretched legs, their delicately transparent webs expanded to the genial sun. The parents complacently rowed guard near them in all the enjoyment of honest family pride; and the happy little ones were so close to the deep water, that their forms were reflected therein as in a mirror. Suddenly a carrion crow made a dash at one of the cygnets. The enraged father seized the felon on the instant with his bill. In vain the

surprised crow struggled and buffeted to escape from the living vice which firmly grasped him; the old hooper's blood was up, he dragged his enemy into the water, and held him under it till he was drowned. When the swan loosed his hold, an inanimate lump of flesh and feathers floated to the surface, and as he spurned the black mass for the last time, he looked in his snowy robe like some good but indignant spirit trampling the evil one.

Colonel Hawker relates, that on one occasion when he knocked down eight of these swans at one shot, the old male was only winged, and when he found himself overtaken by the colonel's skipper, Read, the brave bird turned round and made a regular charge at him.

2. Mr. Yarrell first drew the attention of zoologists to Bewick's Swan *Cygnus Bewickii*, which had previously passed undistinguished from the hooper, from which, however, it differs in being considerably smaller, as well as in other points.

This wild swan has also a convoluted trachea, which enters the hollow keel of the sternum, but its disposition varies from that observed in the hooper. When the windpipe, which is of equal diameter throughout, arrives at the end of the keel, it gradually inclines upwards and outwards, passing into a cavity of the sternum destined for its reception, changes its direction from the vertical to the horizontal, and when it reaches within half an inch of the posterior edge, is reflected back, after describing a considerable curve, till it again arrives at the keel, which it once more traverses in a line immediately above its first portion, and then passes out under the merrythought: here turning first in an upward, and afterwards in a backward direction, it enters the body in order to be attached to the lungs.

The sound produced from this convoluted pipe in captivity, is a low, deep-toned whistle, repeated only once. Such a note was uttered by those in the possession of Mr. Sinclaire, principally at the migratory periods, March and September; but Mr. John Blackwall gives a very different account of the clangour of a wild flock of twenty-nine, as they were flying, in December, over Crumpsall, not above fifty yards from the surface of the earth. "They flew in a line, taking a northerly direction; and their loud calls, for they were very clamorous when on the wing, might be heard to a considerable distance."

An adult bird measures rather more than four feet in length, and is pure white, with the base of the bill orange yellow (lemon colour in a bird of the second winter.) The iris is dark, and the legs and feet are black.

This species, according to M. Temminck, breeds in Iceland in the month of May. Captain Lyon describes the nest, if indeed

the bird noticed by him was a *Cygnus Bewickii*, and not one of the American species, as built of moss-peat, and nearly six feet long, by four feet and three-quarters wide. On the outside it was two feet in height, and the diameter of the cavity was a foot and a half—a roomy cradle. The eggs were brownish white, slightly clouded with a darker tint. Temminck states that the colour of the eggs, which are six or seven in number, is yellowish brown.

When on the water, Bewick's Swan is more anserine in its appearance than the hooper; but on land it shows itself to greater advantage. It is a mild, inoffensive bird in disposition, living amicably with the other water-fowl with which it may be associated in captivity, and never tyrannizing over such as are inferior to it in size and strength. Mr. Blackwall tells a story, pregnant with proof that it has warm feelings, and is capable of the strongest attachment.

The twenty-nine, whose loud calls Mr. Blackwall noticed, alighted, he tells us, on an extensive reservoir near Middleton, belonging to Messrs. Burton and Sons, calico-printers. There they were shot at, and one of them was so severely wounded in its wing, that it was disabled. The stricken bird was left behind by the *herd*, but it was not wholly abandoned; one faithful swan continued to fly about the spot for hours after the rest had departed, uttering almost incessantly its mournful cry. This was on the 10th of December. Mr. Blackwall thus continues his narrative:

"In consequence of the protracted disturbance caused by the persevering efforts of Messrs. Burton's workmen to secure its unfortunate companion, it was at last, however, compelled to withdraw, and was not seen again till the 23rd of March, when a swan, supposed to be the same individual, made its appearance in the neighbourhood, flew several times round the reservoir in lofty circles, and ultimately descended to the wounded bird, with which, after a cordial greeting, it immediately paired. The newly-arrived swan, which proved to be a male bird, soon became accustomed to the presence of strangers; and when I saw it on the 4th of April, was even more familiar than its captive mate. As these birds were strongly attached to each other, and seemed to be perfectly reconciled to their situation, which, in many respects, was an exceedingly favourable one, there was every reason to believe that a brood would be obtained from them. This expectation, however, was not destined to be realized. On the 13th of April, the male swan, alarmed by some strange dogs which found their way to the reservoir, took flight, and did not return; and on the 5th of September, in the same year, the female bird, whose injured wing

had recovered its original vigour, quitted the scene of its misfortunes, and was seen no more."

Doubtless she joined her lover in regions where calico-printers and strange dogs are unknown; and it looks as if he had said to her, "There is no peace or comfort to be had here, though the people are kind after their fashion. I must be off, or I shall be worried as fair game; you'll soon be well, and know where to find me."

3. Another species, the Polish Swan, *Cygnus immutabilis*, has been added to those previously ascertained by the acuteness of Mr. Yarrell, who describes the adult bird as having the bill of a reddish-orange; the nail, lateral margins, and base of the upper mandible, black; the black tubercle or berry at the base of the bill, of small size, even in an old male; the elongated openings of the nostrils not reaching the black colour at the base of the bill, on each side, but entirely surrounded by the orange-colour of that organ; the irides of the eyes, brown; the head, neck, and the whole of the plumage, pure white; the legs, toes, and intervening membranes, slate-gray.

The same zoologist states the measurement of the Polish swan to be fifty-seven inches from the point of the bill to the end of the tail; and says, that the food and habits closely resemble those of the mute swan, *Cygnus olor*, whose organ of voice he found that of *Cygnus immutabilis* to resemble. Considerable differences, however, exist between the heads of the two species.

But whence the specific name *immutabilis?* Unlike those of the other swans, the cygnet of this species is white, and no change takes place in the colour of the plumage after its sortie from the egg-shell.

Mr. Yarrell remarks, that during the severe winter of 1838, several *herds** of this species were seen pursuing a southern course along the line of our north-east coast from Scotland to the mouth of the Thames, and several specimens were obtained. He exhibited, at a meeting of the Zoological Society, one of four which were shot on the Medway, near Snodland church, where a herd of thirty, and several smaller companies were seen.

The swan, *Cygnus olor*, is so interwoven with ancient lore, especially that of our own islands, that it deserves a chapter, and shall have it.

We must now take leave of Europe for the present, and beg our readers to change the scene to America.

"Dissection," says Mr. Yarrell, "which proved the distinction between the hooper and Bewick's swan, has also proved that the

* *Herd* is the technical term for a flock of swans.

true wild swans of North America are peculiar to that country, and distinct from the two European swans.

4. Of the American swans, the largest—it is larger than our hooper—is the Trumpeter Swan, or Hunter's Swan, *Cygnus buccinator*, the *Keetchee wapeeshew* of the Cree Indians.

The bill of this species bears a close resemblance to that of the hooper in form; but that organ, as well as the cere and legs, is entirely black. The reddish-orange tinge of the forehead is, generally, the only exception to the pure white of the plumage: some specimens, indeed (younger birds probably), have the crown and cheeks of a bright chesnut. The total length of the bird may be stated as nearly seven feet. Seventy inches is given as the total length of one, and twenty-six inches as that of its wing by Dr. Richardson.

Lawson in his "Natural History of Carolina" (1714), says:

"Of the swans we have two sorts; the one we call *Trompeters*, because of a sort of trompeting noise they make. These are the largest sort we have, which come in great flocks in the winter, and stay commonly in the fresh rivers till February, that the spring comes on, when they go to the lakes to breed. A cygnet, that is, a last year's swan, is accounted a delicate dish, as indeed it is. They are known by their head and feathers, which are not so white as old birds."

Dr. Richardson observes, that a fold of the windpipe in this swan enters a protuberance on the dorsal or anterior aspect of the sternum at its upper part, which is wanting both in *Cygnus ferus* and *Cygnus Bewickii*, in other respects the windpipe is, he says, distributed through the sternum, nearly as it is in the latter of these species. The curious reader will find this part of the organization well described and figured in the seventeenth volume of the "Transactions of the Linnæan Society."

Whatever associations the Icelanders may have combined with the notes of the hooper, Hearne rejoiced not at those of the trumpeter. "I have heard them," says he, "in serene evenings, after sunset, make a noise not very unlike that of a French horn, but entirely divested of every note that constituted melody, and often been sorry that it did not forbode their death!" and yet these cacophonous *Keetchee wapeeshews* are the harbingers of the geese, whose advent is anxiously watched for in the fur countries, and hailed with exceedingly great joy by the Indians of the wood and swamp, whose summer, or rather spring manna, the geese are.

The trumpeter swans are stated by Dr. Richardson, to breed as far south as latitude 61°, but principally within the arctic circle. Great flights of them come sweeping down the valley of the Mississippi as the winter approaches, with their hoarse unearthly

music sounding like the horns of the wild chase in the air in the Freischutz.

If this be the species which Hearne alludes to, and there can be little or no doubt that it is, their rapidity when going down wind must be excessive.

"In a brisk gale," says he, "they cannot fly at a less rate than a hundred miles an hour, but when flying across the wind or against it, they make but a slow progress, and are then a noble shot."

Again, he declares that it is "frequently necessary to take sight ten or twelve feet before their bills;" but this was in the good old slow flint and steel times, and long before the days of copper caps and cartridges. When, however, a sportsman had knocked one over,—with what a thump a wild swan, when killed clean, comes down!—he had something besides the satisfaction of the shot. The bird itself is described by Hearne as "excellent eating, and when roasted, is equal in flavour to young heifer-beef, and the cygnets are very delicate," and then there were the quill-feathers and the soft plumage.

Most of the swan-down which comforts whilst it adorns our fair countrywomen is the spoil of the trumpeter, from which the Hudson's Bay Company principally derive their importation of swan-skins.

5. Dr. Sharpless has described the second species of swan peculiar to America, in the "American Journal of Science and Arts," where an account of it will be found under the name of *Cygnus Americanus*. Mr. Audubon subsequently gave a very good description of it in the fifth volume of his highly interesting "Ornithological Biography."

This evidently is the swan alluded to by Lawson in the following passage:

"The sort of swans called *hoopers* are the least. They abide more in the salt water, and are equally valuable for food with the former. It is observable that neither of these have a black piece of horny flesh down the head and bill as they have in England."

Cygnus Americanus resembles Bewick's swan in some respects internally as well as externally. The total length ascribed to it is four feet six inches, and the weight is stated as twenty-one pounds. Thus it almost equals the European hooper in size, and has apparently been mistaken for it by authors generally.

Nuttall in his pleasant little book* makes the American swans

* "A Manual of the Ornithology of the United States and of Canada." 2 vols. 8vo. Boston, 1834.

consist of the trumpeter, the wild, or whistling swan (*Cygnus ferus*), and Bewick's swan. Dr. Richardson notices the trumpeter and Bewick's swan only.

6. When Juvenal wrote the often quoted hundred and sixty-fourth line of his bitter sixth satire, little did he or his readers think that the time would come when a country would be discovered occupying a space upon the globe almost coextensive with the empire under which he flourished, where the swans would be black instead of white, and where the rarity would be to find one of the latter hue.

Witsen's letter to Dr. Martin Lister giving an account of the transmission of this Plutonian swan to Europe appears in the "Philosophical Transactions" and a pair were brought alive to Batavia in 1726 as Valentyn has related. Cook, Vancouver, Phillip, White, Labillardière, and D'Entrecasteaux, the latter, during his search for the unfortunate La Pérouse, all mention it, and of these D'Entrecasteaux enters into a comparatively particular description of this remarkable bird, no longer uncommon, and breeding in captivity like its white congeners among the

"Penitus toto divisos orbe Britannos,"

who now possess a much more ample share of that very world than ever the Romans did.

So familiar is the black swan (*Cygnus atratus*), that it hardly becomes necessary to describe it, but as its white brethren have been pourtrayed with the pen as well as our hand would permit, some account of this species will be expected.

In form, the black swan is not unlike the white swans of Europe and America, but in size it is somewhat less. The black plumage is only relieved by the small portion of white which the primary and some of the secondary quills show.

The bright red upper mandible is banded with white anteriorly, and at its base, in the male, there is often a light tubercle, which is wanting in the female. The lower mandible is greyish white. The legs and feet are of a dull ash colour. The cygnets, when they are about a fortnight old, are clothed in a down which, above, is of a dusky grey colour, but lighter on the under parts; their little bill, eyes, and feet are dusky black.

Lieutenant-colonel Collins in his account of the English colony in New South Wales, and of the voyage, &c., abstracted from the journal of Mr. Bass (1802), states that the Norfolk, after leaving Furneaux's islands, proceeded towards the north coast of Van Diemen's Land, and on the 1st of November anchored for a tide at the largest of the "Swan Isles," two small islands so named by

Lieutenant Flinders, when he was there in the Francis, because an European who belonged to Sydney Cove, had assured him that he had met with vast numbers of breeding swans there. The island at which the sloop anchored was low, sandy, and barren.

"Notwithstanding the information given by the European," says Collins, "not a single swan was found upon the island, but several geese were breeding there, and the sooty petrel possessed the grassy parts; the swans of the sailor, in this instance therefore, turned out to be geese. This bird had been seen before upon Preservation Island, and was either a Brent or a Barnacle goose, or between the two. It had a long and slender neck, with a small short head, and a rounded crown, a short, thick arched bill, partly covered with a pea-green membrane, which soon shrivelled up and came away in the dried specimens. Its plumage was, for the most part, of a dove colour, set with black spots. It had a deep, hoarse, clanging, and, though a short, yet an inflected voice. In size, it was rather less than our tame geese, and lived upon grass. The flesh was excellent."

There can be no doubt that these birds were of the species since described under the name of *Cereopsis Novæ Hollandiæ* and which have bred for some years in this country. There is, however, some excuse for the sailor, for this New Holland goose is not without something of a swanlike appearance.

The Norfolk afterwards proceeded to Port Dalrymple, and Mr. Bass had an opportunity of observing a portion of the country situated within an angle formed by two chains of mountains, and, more especially, those parts which lay contiguous to the river, which they examined up to the point where it had become half fresh, half salt; although its breadth was from half a mile to a mile and a half, and its depth eight or nine fathoms. The few rocky shores of the river presented nothing remarkable. The great grey kangaroo abounded in the open forest, and the brushes were tenanted by the smaller black kind, the *wal-li-bah* of the Port Jackson natives. The plumage of the *Psittacidæ*, near the settlement, is rich in colour and lustre, but here the garb of the parrots, as if to be in keeping with the gloomy colour of the swans, was remarkably sombre, and there only wanted the melancholy toll of the bell-bird—*Dil Boong* of the natives, which seemed to be unknown in this spot—joined to the mournful aspect of the feathered bipeds, to make the funereal scene complete.

Many water-birds swam or waded about the arms and coves of the river; but the black swans alone were remarkable in point of number. Mr. Bass once made a rough calculation of three hundred swimming within the space of a quarter of a mile square;

"and heard the dying song of some scores—that song so celebrated by the poets of former times, exactly resembled the creaking of a rusty sign on a windy day. Not more than two-thirds of any of the flocks which they fell in with could fly, the rest could do no more than flap along upon the surface of the water, being either moulting or not yet come to their full feather and growth, which they require two years to attain. They swam and flapped alternately, and went along surprisingly fast. It was sometimes a long chase, but the boat generally tired them out. When in danger, and speed makes no part of their escape, they immerse their bodies so far, that the water makes a passage between their neck and back, and in this position they would frequently turn aside a heavy load of shot. They seemed to be endowed with much sagacity; in chase they soon learned the weakest point of their pursuers, and, instead of swimming directly from them, as they did at first, always endeavoured in the most artful manner to gain the wind, which could only be prevented by anticipating their movements, and by a dexterous management of the boat."

This last manœuvre of the persecuted swans looks very like the result of reflection, when contrasted with their actions before bitter experience had taught them to put their wit to their enemies, and may be added to the numerous instances on record, which prove that the reasoning faculty, as well as instinct, is possessed by animals, at least to a certain extent.

"This swan," continues our author, "is said to feed upon fish, frogs, and water-slugs; but in the gizzards of many, that at different times, and in different places, were examined by Mr. Bass, nothing ever appeared but small water-plants, mostly a kind of broad-leaved grass, and some little sand. To their affection for their young, he had seen some lamentable sacrifices; but of their fierceness, at least when opposed to man, or their great strength, he had seen no instance."

A pair of these birds were with great care brought alive to England in the Buffalo, which arrived at Spithead in May, 1801, and were given by Lieut. William Kent to Earl St. Vincent, who presented them to Queen Charlotte, by whom they were sent to Frogmore. They were of different sexes; but the female, unfortunately, died in moulting, and the widower having recovered, together with his health, the complete use of his wings, which had not been cut, availed himself of the liberty he enjoyed, and was shot by a nobleman's gamekeeper as he was flying across the Thames.

In Van Diemen's Land, New South Wales, and New Holland, the black swans have generally been seen in herds of eight or nine,

floating quietly on some lake or pool. When flushed, they go off in a straight line, one behind the other; and when in full plumage, or not detained by parental affection, are difficult of approach, seldom suffering the sportsman to come within gun-shot. Their disposition seems to be mild, and they are no match for the violent temper of the mute swan, *Cygnus olor*, as those who may think it worth while to look at our future sketch of that species will find.

Here then we must, for the present, take our leave, with an admonition to those "gunners" or "punt-shooters" who go after the wild fowl in England or America, by night, to take warning from Jemmy Randall's shot, immortalized in the ancient Irish ballad intituled:

MALLY BANN.

1.

Jemmy Randall went a shooting,
A shooting in the dark;
But to his great misfortune,
He did not miss his mark.

2.

His love's apron being about her,
He took her for a swan;
But alas! and for ever, alas!
It was sweet Mally Bann.

3.

When he came up unto her,
And found that she was dead,
Great abundance of salt tears
For his darling he shed.

4.

He went home to his father
With his gun in his hand,
Crying, "Dear father, dear father,
I've shot Mally Bann."

5.

His father looked upon him
(His hair being gray)
Crying, "Oh! my dearest son,
You must not run away:

6.

"Stay at home in your own country—
Let your trial come on;
By the laws of sweet Ireland,
You shall never be undone."

7.

Within two or three months after,
To her uncle appeared she,
Crying " Dear uncle, dear uncle,
Let Jemmy Randall go free.

8.

" For my apron being about me,
He took me for a swan."
But it's, oh! and for ever, alas!
It was sweet Mally Bann.

9.

When the fair maids in the city
Were assembled in a row,
She appeared among them
Like a mountain of snow.

10.

All the maidens in the country
They held up their head,
When this beautiful, this lovely,
This fair one was dead, &c. &c.

Eheu Mariola

TAME SWANS.

"I go to soft Elysian shades
And bowers of kind repose;
Where never any storm invades,
Nor tempest ever blows.

"There in cool streams and shady woods
I'll sport the time away,
Or swimming down the crystal floods,
Among young halcyons play."

SONG OF THE DYING SWAN.

THOMAS BROWN, doctor of physic, in the third book of his "Pseudodoxia Epidemica," chapter XXVII., "compendiously treating of sundry tenents concerning other animals, which examined, prove either false or dubious," thus writeth:

"And first from great antiquity, and before the melody of the syrens, the musical note of swans hath been commended, and that they sing most sweetly before their death. Thus we read in Plato, that from the opinion of *Metempsuchosis*, or transmigration of the souls of men into the bodies of beasts most suitable unto their human condition, after his death, Orpheus the musician became a swan. Thus was it the bird of Apollo, the god of musick by the Greeks, and the hieroglyphick of musick among the Ægyptians, from whom the Greeks derived the conception, hath been the affirmation of many Latines, and hath not wanted assertors almost from every nation."

After much learned discussion wherein, *inter alia*, he refutes the story "delivered" by Aldrovandi "concerning the musick of the swans on the river of Thames near London," and shows that "the formation of the *weazon*" in those birds is not peculiar to them "but common also unto the Platea or Shovelard, a bird of no musical throat," he alludes further to the confession of the Italian, that the tracheal apparatus in the swans may be contrived to contain "a larger stock of ayr, whereby being to feed on weeds

at the bottom, they might the longer space detain their heads under water."

But a still further objection occurs to the philosophical doctor in "the known and open disadvantage" of a flat bill, "for no latirostrous animals (whereof nevertheless there are no slender numbers) were ever commended for their note, or accounted among those animals which have been instructed to speak." And he sums up his argument thus:

"When, therefore, we consider the dissention of authors, the falsity of relations, the indisposition of the organs, and the immusical note of all we ever beheld or heard of, if generally taken and comprehending all swans, or of all places, we cannot assent thereto. Surely he that is bit with a *tarantula*, shall never be cured by this musick; and with the same hopes we expect to hear the harmony of the spheres."

The latter certainly may be expected to regale our ears at about the period when our much confiding friend, Mr. Simbledon Hopeful, receives his first dividend from the grand joint-stock company for pickling pine-apples.

It is curious that ornithologists should term the swan of the poets *The Mute Swan*, and it is by no means clear that the ancients did not confound the more canorous and less graceful species, the Hooper, with the tame or mute swan, the bird now under consideration. Hoopers may be seen to this day on "Cayster's flowery side," and we know that *they* "sang their last and died" in the great holocaust when the sun's son was run away with; but the mute swan, *Cygnus olor*, does not appear to have been ever noticed there. That the last named species *was* the musical swan of the ancients there can be no doubt. A cameo, representing Leda and the swan, figured in the "Gemmæ" of Leonardus Augustinus from the Orsini collection, would extinguish any doubt on that point. The Hooper carries its neck nearly upright as it floats and walks, looking stiff and awkward when compared with the elegant bending carriage of *Cygnus olor*. When, therefore, Aristotle is quoted as saying that swans are canorous, especially at the end of life, and that they pass over the seas singing, it is almost evident that there is a confusion of the attributes of two species. However this may be, it is pretty clear that τὸ κύκνειον ᾆδειν passed into a proverb for a dying speech, and that often none of the most decorous. A Deipnosophist in Athenæus tells a story from Chrysippus of a poor devil led forth to death, who prayed the executioner to stay his hand a little while, for that he had a great longing to die like the swans, singing. The *carnifex*, who from experience knew what odd fancies are apt to come into the minds of men when "small back

is gripping them," granted his prayer; when the condemned poured forth such a torrent of invective upon all and sundry as, if done into choice English, would not have disgraced the most celebrated of our Tyburn heroes;—no, not Abershaw himself,

"When the king and the law, and the thief had their own."

To talk of the music of the mute swan, seems to be rather Milesian; and, indeed, to apply that term to the notes uttered by any of the swans, is to use a licence more than poetical, albeit, as we have admitted in our last chapter, the clangour of some of them sounds not unpleasantly, when softened by distance. Oppian makes them the birds of dawning, pouring forth their song upon the sea-shore before sunrise, when

"Lucifer had chas'd
The stars away, and fled himself at last."

But whether they sang early in the morning, or at the latest possible period of life, the *mute swans* are not condemned to the silent system as the name would imply. They may be heard in spring and summer murmuring rather than singing with a soft, low voice, plaintive withal, while complacently accompanying their young. Colonel Hawker has printed a few bars of a domesticated wild swan's melody, the notes being two C, and the minor third (E flat); and the gallant writer declares that the musician kept working his head, as if delighted with his own performance.*

The wind instrument of the mute swan is thus constructed.

The keel of the breast-bone is single, there being no cavity: the windpipe comes down between the forks of the merry-thought, and then curves upwards, and passes backwards to the bone of divarication, whence its short tubes proceed to the lungs.

In this country the bird has long been considered of sufficient importance to demand the special care of the legislature, and stealing or spoiling its eggs was punishable by statute.†

By the old law, when a marked swan was stolen in an open and common river, the purloined bird, if it could be obtained, and if not, another swan, was hung up by the bill, and the thief was compelled to hand over to the party robbed as much wheat as would cover all the swan, the operation being effected by pouring the grain on its head till it was entirely hidden. But stealing marked and pinioned swans, or even unmarked birds, if kept in a moat, pond, or private river, and domesticated, is felony. The taking of swans not so marked or kept is a misdemeanor only.

* Instructions to young Sportsmen. † II. Hen. VII. c. 17. I. Jac. c. 27.

In England the swan is a royal bird, and by a statute of our fourth Edward, no person other than the son of the king could have a swan-mark, or "game of swans," unless he possessed a freehold of the clear yearly value of five marks, 3*l.* 6*s.* 8*d.* of our present money. The privilege of keeping a game of swans, *deductus cygnorum*, or, as it more rarely runs in the old law-Latin, *volatus cygnorum*, is manifested by the grant of a *Cygninota* or swan-mark, which is a freehold of inheritance, and may be granted over. Leland in his κυκνειον ασμα or swan-song, shows forth the royalty of the bird and figures a *Cygnea pompa*, wherein a crowned swan rows his state, surrounded by nine cygnets.

There appears to be a doubt whether the swan is a bird royal in Scotland; but although the proprietors of the

"Land of the mountain and the flood"

possess the right of fowling over their own grounds, swans, it seems, unless specially granted, are reserved to the crown.

Nor was the *cygninota* the only privilege accorded by royalty: there was also the delegation of the prerogative right of seizing, within certain limits, all white swans not marked. In the palmy days of the Roman Catholic Church such a privilege was vested in the princely Abbot of Abbotsbury, whose district extended over the estuary formed by Portland Island and the Chesil Bank, the stern barrier to the fury of the waves rolling in from the Atlantic, and the scene of many a shipwreck. When that church tottered to its fall this royal right was granted to the ancestor of the Earl of Ilchester, in whom it is at present vested, and although somewhat shorn of its ancient extent, it is still the largest swannery of this description in the kingdom. A noble spectacle, even now, is presented there; for the swans are not crippled in the pinion, and the sight of some eighty of these splendid birds, many of them on the wing together, will not be readily forgotten by those who have witnessed it.

There was, in old times, an officer called the royal swanherd, *magister deductus cygnorum*, and that not with reference to the Thames alone. Persons who executed this office of "master of the king's swans" in the counties of Huntingdon, Cambridge, Northampton and Lincoln, as well as that of "supervisor and appraiser" of all swans in any mere or water in Huntingdonshire, may be traced in the parliament rolls. There was a swannery of some extent at Clarendon in Wiltshire, as an appendage to that royal palace or manor; and there was also one in the Isle of Purbeck.

Nor was the Isis unadorned, formerly, by these noble birds, for in the sixteenth century, Oxford, *Isïdis vadum*, Saxonicè *Ousford*,

and *Ousenford*, boasted of a game of swans. "Her husband Thame" bore and still bears upon his bosom the greatest numbers, although they are sadly reduced. The Queen and the city companies of the Dyers and Vintners are, at present, the largest swan-owners on the Thames. When numbered in 1841 there were two hundred and thirty-two belonging to the crown, one hundred and five the property of the Dyers, and one hundred of the Vintners. In the good old times the Vintners alone reckoned five hundred as their share.

But the swan-mark?

This is cut upon the upper mandible, and consists of certain figures denoting the ownership. Queen Victoria's mark—and it was that of the three last kings—is composed of five open, rather long ovals, pointed at each extremity. Two of these are placed with the ends in a longitudinal direction on each side of the "berry," and a little below it; the other three go across the bill transversely, a little lower down. Mr. Yarrell in his interesting "British Birds," figures many of these *cygninotæ*. Two cuts or nicks in the form of a V placed longitudinally on the bill, the open part of the letter being towards the berry, form the Vintner's mark, and from their swans with two nicks have been hatched—we speak with all due reverence for Mr. Kempe's doubts—the double necked swans whose portraits grace our sign-boards.

It is to review or repair these marks, and cut them upon the bills of the young birds, that the markers of the royal swans, and of those belonging to the companies above-mentioned, on the first Monday in every August go a "swan-upping," or "swan-hopping," according to the popular and corrupted term, when the "swan-uppers" catch the swans, and take them up for inspection and notation.

"What a great trust it is," says Howel, in his *Londinopolis*, "for the Lord Mayor to have the conservation of the noble river of Thames, from Stanes Bridge till she disgorgeth herself into the sea? How stately is he attended when he goes to take a view of the river, or a swan-hopping? And lately, what a noble addition was it for the Lord Mayor to have a park of deer of his own so near the city, to find him sport and furnish him with venison? What an honour is it for the Lord Mayor to be accounted the first man of England upon the death of the sovereign prince. As when King James was invited to come and take the crown of England, Robert Lee, Lord Mayor of London, was the first man who subscribed, and then the officers of the crown, with the chief noblemen after him. The Recorder of London, also, is *Primus*

Consiliarius Angliæ, and is privileged to plead within the barre. The Lord Mayors of London have been called sometime to sit at the council-table, as Sir John Allen was in Henry the Eighth's time, with others (which Allen gave that rich collar of gold which the Lord Mayors use to wear) and the aldermen, his brethren, were used to be called barons."

And again:

"Now touching the magnificence, gravity, and state of the chief magistrate: neither the *Pretor* of Rome, nor the *Prefect* of Milan; neither the *Proctors* of St. Mark, in Venice, or their *Podestas* in other cities; neither the *Provost* of Paris, the *Mark-grave* of Antwerp, can compare with the Lord Mayor and Sheriffs of London: if one go to the variety of their robes, sometimes scarlet, richly fur'd, sometimes purple, sometimes violet and puke. What a goodly spectacle it is to behold the Lord Mayor, and the Companies attending him in so many dainty barges, when he goes to be sworn in Westminster-Hall; and what brave shews there are attending him by land at his return? What a plentiful sumptuous dinner, consisting of so many huge tables, is provided for him? What a variety of domestick officers wait upon him perpetually, whereof, with the Remembrancer, there are five of them esquires by their places? What a comely sight it is to see the Lord Mayor, sheriffs, and aldermen, going in their robes upon festivals to the cathedral church of St. Paul's, though they who stand so well affected to the present government, say, that he goeth in now at the *wrong end* of the church: what a goodly sight it is when he goeth upon Easter holidayes to the *Spittle*, with the sword and cap of maintenance going before him? How his robes are fitted for the season, as from Michaelmas to Whitsontide, he weares violet fur'd; from Whitsontide to Michaelmas, scarlet lined; and for distinction among the aldermen, they who have bin Lord Mayors, have their cloaks lined with changeable Taffata; but those that have not, with green Taffata! What great places of trust are committed to the Lord Mayor, as the keeping of the Great Bridge in repair, which hath such large revenues belonging unto it, with a particular stately seal, which of old had the effigies of Thomas of Becket (a Londoner born) upon it, with this inscription in the name of the city—

'Me quæ te peperi, ne cesses, Thoma, tueri.'

But the seal was altered in Henry the Eighth's reign."

Reverting to the legislative protection thrown round the swan, it may be asked how came the bird to be held in such high estimation by our ancestors? It is pleasant to look upon, certainly—

"beautiful exceedingly," no doubt—and there was the old *prestige* in its favour; but still this will hardly account for its being hedged in by penal statutes so closely, that it was only accessible by royal grant or prescription: no; the truth must be told; the cause lay deeper,—in that omnipotent assimilating agent, the stomach.

Now the possession of a stomach *per se*, is not distinctive—nay, the lowest *Infusoria* are endowed with a polygastric power, to which the most accomplished alderman has not the slightest pretension: the life of these *Polygastria*, indeed, is one perpetual feast. But it is the cultivated and discriminating stomach that distinguishes civilized man; and one of his first legislative cares has always been to protect his tit-bits. Nor is it matter of wonder that the "flaming minister" who laid his offerings before the gastric shrine, should have been considered, even in early times, a personage of some consequence. Accordingly we find him a character of high repute among the polite Athenians, although it must be admitted that the cook seems to have been a slave of no high grade among the stern Romans.

The *Larderarius*, however, of the Normans was often a clergyman, and instances are on record of his leaving the larder to assume the mitre. The *Grans Queux* were officers of dignity in the palaces of princes, and so it was in the golden days of the monasteries, where they were always monks, and indeed in old times there is reason for believing that the execution of the office by ecclesiastics was not confined to those establishments. In the affray at Oxford in the year 1238, between the retinue of the Pope's Legate, Cardinal Otto, and the students, the cardinal's *magister coquorum* and own brother lost his life. Poisoning was then rife in Europe generally, and this accounts for the appointment of persons of rank to the culinary department. Matthew Paris gives it as a reason for the tenure of the office by so near a relation of the Cardinal—"Ne procuraretur aliquid venenorum quod nimis timebat legatus." Every thing relating to diet was considered of great consequence by our ancestors, and there is extant in Leland an order for a physician to watch the young prince's wet-nurse at every meal, as inspector of her meat and drink.

Our readers may not be unwilling to learn what an Oxford row in the thirteenth century was like. A grand row it was, as may be supposed, when it had for its initiative elements an Irishman, a Welshman, and an Italian. The clerical scholars sent to the abbey where the Legate was lodged a present of viands and liquors for his use, before dinner. After dinner

they waited on him themselves for the purpose of saluting him with all honour and reverence. Unfortunately a Transalpine porter, more impudent than beseemed his station, holding the gate ajar and shouting, "more Romano," cried somewhat petulantly, "what d'ye want?" The scholars replied that they wanted to see the Legate that they might salute him; for they thought, it seems, that they were to receive honour for honour. The porter, however, treating them with a most provoking *haut en bas*, not without abuse, flatly refused to admit them. Upon which the scholars made some such a rush as their successors made in better temper at the theatre when the hero of a hundred fights was installed, and got in pell-mell. They were met by a body of the Romans, who pummelled them with their fists, and belaboured them with sticks, not without repayment by the storming party, and when the fray was at its height, and they were abusing each other in university Latin, and choice *lingua franca*, plying their staves by way of accompaniment, a poor Irishman, who stood by the kitchen door, more mindful of his hungry stomach than the row, begged for a morsel of something good for God's sake. When the proud master cook heard his prayer, which he probably did not understand, he became so wrathful, what with the noise of the combat and the heat of his post, that he dipped a ladle into the boiler where the fat meats were simmering, and threw its contents into the petitioner's face.

A fiery scholar from the principality saw the indignity. Up rose his Welsh blood; he exclaimed, "*Proh pudor!*" *Anglicè* "What a shame!" and bending his bow which he had brought to aid his fellow-students, drew it with such hearty will that he sent a shaft right through the body of the *chef*, who fell dead. The Legate, on hearing the shout that accompanied his brother's fall, gat him up into the church-tower in his canonicals and also in a parlous fear, and there locked himself in. At nightfall, and when the tumult had somewhat subsided, he threw off his sacred vestments, mounted his best horse, forded the river not without peril, and fled to King Henry for shelter and redress, leaving the enraged scholars seeking for him with expressions that left little doubt what *his* fate would have been had he fallen into their hands. They paid dearly for this outbreak: the most active were brought to London, imprisoned, and most catawampously anathematized; or as Matthew Paris has it, "*anathemate innodati.*"

But to return to our swans. From a very early date the bird has held a high place at high feasts. It graced the board at the nuptial dinner when Iphicrates married the King of Thrace's

daughter; and, to come at once to our own country, greatly did it shine forth at the ancient British festivals, when

> " O'er capon, heron-shaw, and crane,
> And princely peacock's gilded train,
> And o'er the boar's head garnished brave,
> And cygnet from St. Mary's wave;
> O'er ptarmigan and venison,
> The priest had spoke his benison."

At the "intronazation" of George Nevell, Archbishop of York (to whom no less a person than Lord Willoughby was carver) in Edward IV's reign, four hundred swans were among the "goodly provision" made for the same; there were the same number of "heron-shawes," and two hundred and four cranes, the same number of bitterns, and no less than a thousand "egrittes," fit company for the hundred and four oxen, six "wylde bulles," and thousand "muttons," to say nothing of two thousand "pygges," ditto geese, ditto chickens, four thousand pigeons, ditto "conyes," fifteen hundred hot pasties of venison, four thousand cold ditto, "stagges, buck, and roes, 500 and mo.," and twelve "porposes and seals" among a profusion of game (including two hundred "Fessauntes"), fish, and a wilderness of sweets.

Grand were the doings, albeit upon a somewhat less scale, at the marriage of Sir Gervas Clifton, of Clifton, in the county of Nottingham, with Mary Nevile, third daughter of Sir John Nevile, of Chevet, or Chete, in the county of York. The last-named worthy knight seems to have been a careful economist, notwithstanding his open-handed liberality and true old English hospitality; for he appears to have personally superintended the keeping of his household book on such occasions, if he did not enter the items of the account with his own hand, both on this happy occasion, and when Roger, eldest son, and afterwards heir of Sir Thomas Rockley, of Rockley, in the parish of Worsborough, Knight, married Elizabeth Nevile, Sir John's eldest daughter. Every item, even to the bride's most indispensable garment in the last case, is stated with its price; and if our space would allow a transcript of the whole, it would afford a curious picture of the costume and manners of the period when

> " Bluff King Hal the stocking threw."

Sir John's account of the expence of the dinner at "The marriage of my son-in-law, Gervas Clifton, and my daughter, Mary Nevile, the 17th day of January, in the 21st year of the reigne of our Soveraigne Lord King Henry the VIIIth," includes

"Swans, each swan 2*s.*, 12*s.*" Three Hogsheads of Wine, 1 white, 1 red, and 1 claret, charged at 5*l.* 5*s.*, moistened the swans, the two oxen, two brawns, six calves, seven lambs, six 'withers' (wethers), every wither 2*s.* 4*d.*," ten pigs, "every one 5*d.*," forty-six capons, and whole flights of wild fowl, &c. &c. &c., that loaded the board at this marriage-feast; to say nothing of the produce of eight quarters of barley-malt, "every quarter, 14*s.*"

But the bride's dress?

We care not to be particular, madam, and therefore will only state that she wore—"A Millen (Milan) Bonnit, dressed with Agletts," which cost eleven shillings, a large sum in those days, when the price of an ox was only 1*l.* 15*s.* The "Wedding-ring of gold" is charged 12*s.* 4*d.*

At the marriage "of my son-in-law, Roger Rockley, and my daughter, Elizabeth Nevile, the 14th of January" in the seventeenth year of the same King, we find in the "First course at dinner."

"Imprimis, Brawn with musterd, served alone with Malmsey.

"Item, Frumety to pottage.

"Item, a Roe roasted for standert—(a large or standing-dish.)

"Item, Peacocks, 2 of a dish.

"Item, Swans, 2 of a dish," &c. &c. &c.

Among the pieces of resistance in the second course was "a young Lamb whole roasted," and "For Night" there was

"First a Play, and straight after the Play a Mask, and when the Mask was done then the Banckett, which was 110 dishes, and all of meat; and then all the Gentilmen and Ladys danced: and this continued from the Sunday to the Saturday afternoon."

The Bride Elizabeth wore "a Bonnit of Black Velvet" which cost fifteen shillings, and "a Frontlet for the same Bonnit" which cost twelve shillings.

"For Frydays and Saturdays there was a splendid display of Fish but no fleshmeats; and the following were

"*Waiters at the said Marriage.*

Storrers, Carver.
Mr. Henry Nevile, Server.
Mr. Thomas Drax, Cupbearer.
Mr. George Pashlew, for the Sewer-board end.
John Merys, John Mitchill, } Marshalls.
Robert Smallpage, for the Cupboard.
William Page, for the Celler.

William Barker, for the Ewer,
Robert Sike, the younger, and
John Hiperon, for Butterye."

"To wait in the Parlour.

Richard Thornton.
Edmund North.
Robert Sike, the elder.
William Longley.
Robert Live.
William Cook.
Sir John Burton, steward.
My brother Stapleton's servant.
My son Rockley's servant to serve in the state."

The same worthy knight's charges when Sheriff of Yorkshire, in the 19th year of the same king at the Lent Assizes, and in the 20th year of his reign at Lammas Assizes, bear testimony to the hospitality exercised by that officer in those days. Among the other provisions, we find a charge at the former of these assizes, for five hogsheads of wine, three claret, one white, and one red; the cost of which was 10*l.* 16*s.* 4*d.*; but, though there are quantities of fish, no flesh appears in the account.

At the Lammas Assizes, neither flesh nor fowl was spared; nine quarters of wheat, twelve quarters of malt, five oxen, twenty-four wethers, six calves, sixty capons of Grease, charged at 25*s.*, as many other capons as cost 3*l.* 14*s.* twenty-four pigs, three hogsheads of wine, and twenty-two swans, carry us a very little way down the ample bill of fare.

It will naturally be inquired how the swan was presented on these great occasions?

There is reason for concluding, that the Royal Bird was generally roasted, of which more anon; but there were other ways of serving it up. For instance, among the receipts of the master cooks of Richard II., is the following, which we shall attempt to reduce to the English of the present time.

"CHAUDRON FOR SWANS.

"Take the liver and the offal (that is, the giblets) of the swans, put it to seethe in good broth, take it up, take out the bones, and 'hewe' the flesh small. Make a mixture of crust of bread and of the blood of the swan sodden, and put thereto powder of cloves

and pepper, wine and salt, and seethe it, cast the flesh thereto 'hewed,' and 'mess it forth' with the swan."

When served with this sauce, the dish was called "swann with chaudron."

The bird also not unfrequently came to table "baked in a pye;" but its most usual appearance was as a roast.

The Norwich method is to take three pounds of beef beaten fine in a mortar, adding salt, pepper, mace, and that grand culinary gift, an onion, and stuff the swan (which must not be skinned) with it. The bird must be tied up tight to keep in the juices, and a stiff meal paste should be laid on the breast, the other parts being covered with whited-brown paper; about a quarter of an hour before the swan "is enough," as the cooks say, the paste must be taken off and the breast browned.

It has been said, somewhat oracularly, that port wine should *never* come into a kitchen. If the word had been *seldom*, it would have been more germane to the matter; for there are occasions, trust us, reader, when it cannot well be dispensed with, and the gravy for the swan is one of them; half a pint of that wine added to good, strong, beef-gravy, should be poured *through* the swan, which should be presented with hot currant jelly.

A well-fatted cygnet thus cooked, if taken at the proper moment that is not kept beyond November, after which time the bird falls off both in flesh, fat, and flavour, however well provided with barley—is a very delicious dish, and we have heard it compared, not inaptly, to something between goose and hare.

The foregoing receipt, in printed verse, which will be found in Mr. Yarrell's "British Birds," is usually sent with each Norwich bird.

The swan seems never to have appeared except on the tables of the great. Thus the Gild of the Holy Trinity at Luton, in Bedfordshire, appear from old records ranging from 19 Henry VIII., to the beginning of Edward VI., to have lived well at their anniversary feasts; but we cannot find that they ascended beyond "Geys," eighty-two of which geese, at a charge of *1l. 0s. 7d.* were among the multitudinous dishes placed before the Gild at the feast in the nineteenth year of Henry VIII.

The swanherds call a male swan a Cob, and the female a Pen. A fine old male will sometimes reach, when stretched out, five feet in length, and will weigh some thirty pounds. The nail at the termination of the bill, its edges on each side, its base, the naked skin or lore up to the eye, the opening of the nos-

trils, and the tubercle or berry, are black. The rest of the bill is of a ruddy orange colour. The iris of the eye is brown; the whole of the plumage is of the purest white; and the legs and toes, with their webs, are black.

The female is not so large as the male, and her tubercle is less, her neck is not so thick, and she swims lower in the water than her mate.

In a wild state, this species is found in Russia and Siberia, and almost throughout Europe. In Germany, the cygnets that have not been pinioned, migrate in autumn. Lithuania, Poland, Eastern Prussia, Holland, France, Provence, and Italy, are all recorded as its *habitat* in an unreclaimed condition; and so are the countries between the Black and Caspian Seas. In winter they have been seen in the Bay of Smyrna.

The swan's nest is a great mass of rushes, reeds, flags, and other coarse water-side plants, pitched on the ground near the water's edge, in some ait, for choice; and on this stack of herbage the Pen deposits some six or seven eggs of a greenish white, rather dull withal, and about four inches in length by two. Six weeks must pass before the young cygnet breaks through its prison-walls into light and life; and during the whole time of incubation the male is most assiduous in his attendance, keeping guard, and ready to do battle against all comers; yet thinking no scorn to take the mother's place occasionally on the eggs.

About July, the colour of the cygnets is dark lead-gray, approaching to sooty grey above, the neck and under parts of the body not so dark, the bill lead-colour, and the line at the margin of the base black. At the end of October, when they almost equal their parents in size, the bill changes to light slate-grey, with a tinge of green. The sooty-greyish brown prevails uniformly over the head, neck, and all the upper surface; while the lower surface of the body is uniformly of a lighter hue. The grey colour vanishes almost entirely after the second autumn; and when the cygnet has seen two years, the white robe is donned; in the third year the swan celebrates his nuptials.

In their half-domesticated state, the young family keep with their parents during the first winter; but, on the return of spring, the latter show their cygnets the cold shoulder; and, if they will not take the hint, fairly drive them away, and compel them to seek their own food, which consists of the tender parts of aquatic plants and roots, water insects, and now and then—but only now and then—small fishes.

Aristotle noticed the pugnacity of the swan, saying, that it will even fight the eagle—not that the swan will begin the quarrel, but he will not brook the attack of the Prince of the Birds of

Prey. In rivers they have their own districts; and, if one swan trespasses on the domains of another, woe to the weaker vessel. We have attempted to describe a bloodless encounter of this kind:* but swan-fights do not always terminate so harmlessly.

It is on record, that black swans have more than once fallen victims to the prowess of their white neighbours. On one occasion, in the Regent's Park, two white swans set upon a black one, and one of the whites seizing the black's neck in his bill, shook him so violently and fatally, that he died almost on the spot; whilst the conquerors rowed proudly up and down with arched wings and feathers erect in all the pride of victory.

A friend, who was an early riser, had long noticed four swans on the Serpentine river. When taking his morning walk in June, 1840, he missed one of them, and saw blood upon the wing of one of the survivors. Upon inquiry, he found that the other three had attacked the fourth, and killed him. The body of the murdered swan was whealed as if it had been beaten with sticks.

Long life, when it is not interrupted by violence, is the swan's portion. Willughby speaks of him as "a very long-lived fowl, so that it is thought to attain the age of three hundred years:" "which," (saith Aldrovandus) "to me seems not likely. For my part, I could easily be induced to believe it: for that I have been assured by credible persons, that a *goose* will live a hundred years or more. But that a swan is much longer lived than a goose, if it were not manifest in experience, yet are there many convincing arguments to prove, viz.: that in the same kind it is bigger: that it hath harder, firmer, and more solid flesh: that it sits longer on its eggs before it hatches them. For, that I may invert Plinie's words, those creatures live longest that are longest born in the womb. Now incubation answers to gestation."

Whatever weight there may be in Willughby's argument, there can be no doubt a swan will live a very long time. Mr. Yarrell says, that marked swans have been known to live fifty years; but there was one not very long ago, in the neighbourhood of Shepperton, though not upon the Thames, over whose head more than double that length of years was supposed it have passed.

The *Morning Post* of the 9th of July, 1840, had the following notice:

"DEATH OF A CELEBRATED CHARACTER.

"The beginning of last week an exceedingly well-known character departed this life, namely, OLD JACK, the gigantic and venerable swan, with which the public have been so long acquainted

* See the "Fragment" headed, "A Word to Anglers," p. 168.

on the canal in the enclosure of St. James's Park, at the advanced age of seventy years. Old Jack was hatched some time about the year 1770, on the piece of water attached to Old Buckingham House, and for many years basked in the sunshine of royal favour, Queen Charlotte being extremely partial to him, and frequently condescending to feed him herself. When the pleasure-gardens in St. James's Park were laid out, Jack was removed there, and his immense size, sociable disposition, and undaunted courage, have often excited the admiration of the public. Jack's strength and courage were, indeed, astonishing. Frequently has he seized an unlucky dog who chanced to approach to the edge of his watery domain by the neck and drowned him; and, on one occasion, when a boy, about twelve years of age, had been teasing him, Jack caught him by the leg of his trousers, and dragged him into the water up to his knees. Jack, however, never acted on the offensive, and, if not annoyed, was exceedingly tractable. But the march of modern improvement affected poor Jack as much as it has done thousands of more pretending bipeds. The Ornithological Society was formed, and a host of feathered foreigners found their way on to the canal, with whom Jack had many fierce and furious encounters, and invariably came off successful. But a legion of Polish geese at length arrived, who commenced hostilities with Jack. Despising every thing like even warfare, they attacked him in a body, and pecked him so severely, that he drooped for a few days and then died. The body of poor old Jack is to be stuffed for one of the scientific museums."

Those who live near the banks of the Thames well know the instinctive prescience with which swans will, before a flood, raise their nests so as to save their eggs from being chilled by the water; and we will conclude this chapter, already we fear too long, with an account of one of these wonderful preparations, clearly showing that to the incubating swan,

"Coming events cast their shadows before,"

for which Mr. Yarrell was indebted to the kindness of Lord Braybrooke.

The scene of this true tale was a small stream at Bishop's Stortford. A female swan had seen some eighteen summers, had reared many broods, and was become familiar to the neighbours, who valued her highly. Once, while she was sitting on four or five eggs, she was observed to be very busy, collecting weeds, grasses, and other materials to raise her nest. "A farming man was ordered to take down half a load of haulm, with which she

most industriously raised her nest and eggs two feet and a half: that very night there came down a tremendous fall of rain, which flooded all the malt-shops, and did great damage. *Man* made no preparation, the *bird* did. Instinct prevailed over reason: her eggs were above, and only just above the water."*

* British Birds. A very interesting account of similar foresight in the Beaver will be found in the *New Sporting Magazine*, for July, 1840. The Elbe, upon a particular occasion, had been higher than it had risen within the memory of man; but the event had been expected because the beavers had been observed to build such unusually high dams, a sure sign of spring floods in that river.

A WORD TO ANGLERS.

"Good luck to your fishing."

THE MONASTERY.

If, as "Thomas Best, Gent., late of his Majesty's Drawing-room in the Tower," saith, "Patience is highly necessary for every one to be endowed with who angles for carps, on account of their sagacity and cunning,"—that virtue is still more essential as an endowment to the angler who goes after the great Thames trouts. He must be content to spend much time in dropping down from stream to weir, from pool to stream, and from stream to weir again, and to burn all the skin off his face many times before he has even a run: moreover, unless he wears gloves—and no one handles his tools with mittens so well as he does without—he will have to present a pair of hands at the dining-table only to be rivalled in their nut-brown hue by those of the gipsy or the gravel-digger. But when he does get a nine or ten pounder into his well, the look-down upon the fish, after all the hair-breadth hazards of losing him when hooked, is worth the weariness of many blank days, and the production of those unpresentable hands to boot.

To be sure, it does sometimes happen, even to the best of sportsmen, that, after the struggle is apparently over, and the fish is close to the boat's side, something will give way, leaving the unhappy Piscator with a straight rod and suddenly slackened line, and also with a sensation as if he had been suddenly deprived of his back-bone.

But for a lover of nature, even when fortune smiles not, this kind of fishing has many charms:—the bright river, the continual change of scene, the rich beauty of the highly cultivated and picturesque country through which it flows, and the exhilarating freshness of the air as it comes laden with the perfume of the new-mown hay, or of the honeysuckle blossoms from

"the cottage of thatch,
Where never physician has lifted the latch,"

make mere existence a pleasure.

Then there is always something to be seen by one who has eyes and knows how to use them. There are the wild flowers that enamel the banks, the insects, the fish—it requires a practised eye to see *them*—the birds. Here, a king-fisher shoots by like a meteor—there go the summer-snipes—the swift darts by close to the boat, like

"An arrow from a Tartar's bow"—

That back-water is positively carpeted with the green leaves and snowy star-bloom of the water-lily—and the nightingale hard by, *in shadiest covert hid*, fairly sings down all the host of day-songsters, though the blackbird and thrush make melody loud and clear.

On one of these expeditions not long ago, we observed below ——— Lock, just as a thunder-storm was coming on, a pair of swans with seven young ones. There was evidently something more than usual going on—some *sensation*, as the French say, among them. The young were collected between the parents, and the whole party pushed up stream. At first we thought they were nearing our punt, as we were dropping down from trying the weir, in the hope of bread; but three of the young ones mounted on the back of the female swan, who elevated her wings to receive them, the brilliant whiteness of her plumage contrasting beautifully with the grey down of the little creatures, and there was a scared appearance about the whole party. The cause was soon manifest.

A magnificent swan, worthy of Leda herself, came ploughing up the water, indignant at a trespass on his domain. The family hurried on: and in their haste, one of the young slipt off its mother's back. There was distress! A weakling was left behind in the wake of its father, and whilst it scrambled along, *non passibus æquis*, uttered shrill cries as the enemy advanced. Up came the mighty bird, and then the father, evidently inferior to the attacking swan in age, size, and strength, turned to meet him, while the little family, huddled close to the mother, made haste to escape up the river. Proud as the senior, the young father threw back his neck between his arched wings, and confronted the giant. This was unexpected: they kept sailing backward and forward abreast of each other, across the stream, like two war-ships; and the watchful turns of their graceful necks and bodies, as each tried to take the other at advantage, was a sight to see. We thought at last that they would do battle; for each of the rivals elevated himself on the water, and made show of combat to the *outrance*. But, by this time, the family, under the guidance of the affectionate mother, were safe, and the elder male swan seemed

to think that the better part of valour was discretion, and that he had driven the intruders from his royalty. So they parted. The young one went up to receive his reward from the mother of his family, and the old one rubbed his neck on his wings, and dived, and dropped down stream again, evidently comforting himself that he had given the trespasser a lesson.

There was a dog belonging to the Lock-house. He, from experience, seemed to know that all swans are bullies; but still the encounter was something for a dog at a lock-house, where anything is an incident. And, indeed, this was so much more earnest in show than the usual conflicts, that he came down towards the brink, though the rain was coming on. At first he sat upon his tail; but, as the affair gave hope of becoming serious, he couched, and when the birds lifted themselves, as in act to fight, dropped his head on his outstretched fore-legs, with all the ecstacy of an amateur. When, however, he found that it was *no go*, and that the menaces ended as usual—much in the same way as they have done of late among the unfeathered bipeds—according to the new code of chivalry, he shook himself, like a sensible dog, and went back to shelter.

On another occasion, after fishing many miles of water with nothing but a few perch and jack in the well as the results, we dropped down to —— Weir.

Wearied with my no-sport, I stretched my listless length on the dry boarding that flanked the main weir, and watched with half-shut eyes, through the tremulous aërial medium that often attends a warm summer's day, the osiers on my left. The thundering of the fall had, by degrees, something soothing in it, and I felt that I was sinking fast into a doze, when I beheld a tall figure, in rusty black, with a club-foot, swarthy sharp visage, and an eye that positively glowed, looking down upon me.

"Ah!" said he, "no sport! Well, I, too, am a sportsman—and a very poor sportsman; but I am getting old, and I cannot walk the weirs now."

How he could ever have walked the weirs with that foot of his seemed a mystery; but the love of sport will carry people over anything. Finding I made no reply, the figure continued—

"What would you give to have on your line that fish, whose glittering side you saw but now, as he leaped from the river, till his splash was heard above the noise of the waters? He that was afterwards chasing the bleak on the shallow till his huge shoulders and back-fin were fairly shown."

"Anything," replied I; for I had been watching this fish—a twelve or fourteen-pounder at least, strong on his feed, and making the small fish skip into the air before him—"anything!"

"I do not want anything very substantial," said he, meekly.

I looked up.

"You said awhile you would give anything?"

"I did."

"You will give it, then?"

"Certainly."

"Agreed."

He produced a small but most brilliant fish—such a one as I had never seen, and I had seen many, a kind of miniature *Opah* or *King-fish*—and fixed it on the hooks of the trace most skilfully.

"You don't repent?" said he.

"No; but I am to have that great fish on my line?"

"Yes."

"And land him?"

"The fish shall be landed."

"I shall want to send him to town. Can you meet me at the church with a basket?"

"I don't go much to churches," said he; "people would stare at me so; but if you mean there," (as I pointed with my rod towards the tower) "I will see you in the churchyard."

I examined my splendid bait to see that it was all right. Neither Wilder, Purdy, nor Goddard could have fixed it better. I tried it in the still water, and it spun admirably. When I raised my head to praise the baiter, he was gone.

I was anxious to try my bait; and beckoned to the fisherman, who was sitting on the other end of the long weir-beam by my companion, as the latter was fishing between the two last spurs, near the eddy in the corner. He came.

"Have you had a run?" said I.

"Yes," replied the fisherman; "but not from the big fish, though the one as come at us was a *solaker*—I put him at seven or eight pounds."

"Where was it?"

"There, in the corner; he came out of the foam, and took us in the *wambling*—but the hooks drew."

"Then the fish are on the feed?"

"Yes; the sun has draw'd the baits up close to the weir, and the fish are come up arter 'em. That great fish *druv* the baits right out of the water but now, at the far side there, just by that *shrimple*."

I showed him my bait fish. "Where did you get that?" said he; "and who put it on?"

"Did you not see the man in black who was talking to me?"

"No; I sid no man in black. I sid a great dark-looking hero

fly away just beyond them osiers, and I wondered how he come to let you be so nigh him; you must ha' bin werry quiet."

I began to climb to the top of the weir-beam. "Is it any use to try again, think you?"

"It's a werry odd bait as ever I see," responded the fisherman; "but it's werry bright, and you may as well try the weir over with it."

I stood on the weir-beam.

Now, no one who has not walked the Thames' weirs can tell what a task it is to walk them, till practice has made it easy. ——— Weir is one that affords as steady footing as any; but to stand on that narrow beam for the first time, whilst the ear is stunned by the roar of the fall, and the eye reels as it is dazzled with the raging white water of the boiling pool, fifteen feet below, demands good nerves. To fish in such a position requires strong ones.

My bait was, at one time, spinning far down in the pool thirty yards off—and at another, as I shortened my line,—which then lay at my feet on the beam or hung down from it,—and reversed my rod, it was glittering close beneath me in the foam on the apron. Suddenly I lost sight of it, and, at the same instant, there was a snatch that I felt to my spinal chord. I had him! I raised my rod in the twinkling of an eye, gave him the butt, and up he sprang into the broad sun-light, showing *a side like a sow*.

"Don't check him!" cried the fisherman, in a voice that was heard above the river-thunder. Out ran the line! Who can be collected at such a moment? It coiled round my ancle, and down I went headlong into the mad water below.

Strange as it may appear, my principal anxiety, as I struck out into the pool to avoid being sucked back under the apron, was to secure the fish, which I felt was still fast. This embarrassed me, and, notwithstanding my efforts, I was drawn back into the weltering waves under the weir. I looked round,—and there I beheld that dreadful face glaring ghastly at me through the smooth glassy sheet of the falling water; and I felt the long deadly arms dragging me, feet foremost, under the apron. In the delirium of despair I cried out,—"You said I should land the fish." "I said," shouted the horror, "that the fish should be landed, and that I would see you in the churchyard;" and he mercilessly pulled me under.

"Lord! Lord! methought what pain it was to drown." The long, cruel arms kept dragging me deeper and deeper. The brightness became less and less. My agony was inexpressible. Then came darkness,—the blackness of darkness. Suddenly my sensa-

tions were even pleasant, and I fancied that I was in a delicious meadow.

A fearful change succeeded. I found myself in a well-known burial-vault,—

> "Girt by parent, brother, friend,
> Long since number'd with the dead."

And there was that grim feature still claiming me, and the long lean arms were stretched out to grapple me, and the grasp entered into my soul. I turned to make one desperate effort at escape, and, opening my eyes, I found myself still stretched on the dry boards. My companion was shaking me by the shoulder, and inquiring, with something like reproach, if I thought that was the way to get the great fish into the well.

MAY.

1

Upon a bright and balmy day,
The flow'rs around were springing;
With hymns of love the birds so gay
Set all the woods a-ringing.
The trouts did leap, the herds did low,
The merry lambs were playing;
And in the hawthorn dell below,
A lassie fair was maying.

2

The blackbird piped so loud and clear,
The thrush the air was filling,
Above a floating downy cloud,
The heaven-ward lark was trilling;
And loudly did the cuckoo call,
As he his way was winging:
And yet I heard above them all
That pretty lassie singing.

3

Adown the vale a zephyr flew,
As if he would adore her;
The hawthorn-bush above that grew,
Dropp'd show'rs of spangles o'er her:
She rais'd her head and shook her locks.
Her laughing eyes did glisten—
Then sang again, till the very flocks
Stood quietly to listen.

4

"Here are nodding cowslips meet
For my little brother,
Primroses and violets sweet
For my own dear mother.
Seated on my father's knee
I shall hear his praises,
While he fondly makes for me
A necklace of these daisies."

5

I've Pasta heard and Bartleman,
Persiani and Rubini;
Sontag, Grisi, Malibran,
Lablache and Tamburini:
But though their voices rich and clear
Set all the town a-ringing,
Far sweeter fell upon mine ear
That little lassie's singing.

PART II.

QUADRUPEDS, ETC.

DOGS.

"The little dogs and all,
Tray, Blanch, and Sweetheart."

LEAR.

YES, dogs *are* honest creatures and the most delightful of four-footed beings. The brain and nervous system may be more highly developed in the Anthropoïd apes, and even in some of the monkeys: but for affectionate, though humble companionship, nay friendship; for the amiable spirit that is on the watch to anticipate every wish of his master—for the most devoted attachment to him, in prosperity and adversity, in health and sickness, an attachment always continued unto death; and, frequently failing not, even when the once warm hand that patted him is clay-cold; what—we had almost said *who*—can equal these charming familiars? Your dog will, to please you, do that which is positively painful to him. Hungry though he be, he will leave his food for you; he will quit the strongest temptation for you; he will lay down his life for you. Truly spake he who said, "Man is the God of the dog."

Of all the conquests over the brute creation that man has made, the domestication of the dog may be regarded as the most complete, if not the most useful: it is the only animal that has followed him all over the earth. And to see how these noble animals are treated by savages civilized as well as uncivilized; kicked, spurned, harnessed to heavy carriages, half-starved, cudgelled, they still follow the greater brute that lords it over them, and if he condescends to smile upon them how they bound in gladness! if he, by some inexplicable obliquity of good feeling, in a moment of forgetfulness caresses them, they are beside themselves with joy.

As a whole their lot seems to be the worst, if it is cast among savage or imperfectly-civilized nations. When Lawson was among the North-American Indians, he was present at a great feast where was "store of loblolly and other medleys, made of Indian grain, stewed peaches, bear-venison, &c.;" when all the viands

were brought in "the first figure began with kicking out all the dogs. which are seemingly wolves, made tame with starving and beating; they being the worst dog-masters in the world;—so that it is an infallible cure for sore eyes ever to see an Indian's dog fat." The tribe who exercised this summary calcitration on the poor dogs, that had most probably contributed not a little to the venison part of the entertainment, rejoiced in the appropriate name of the *Whacksaws* or *Waxsaws*; and yet these same Indians delighted in feeding up their horses till they were comparable to nothing more aptly than an English prize-ox. Though much advanced in the scale of civilization, the Javanese, according to Dr. Horsfield, seem to be little better dog-masters than the Waxsaws; for he remarks that the poor brutes, we mean the dogs, are not cared for, and are ill-treated, so that their famishing condition is disgusting to Europeans. This is the more extraordinary as many of these dogs pursue the Java deer called the *Kidang* with great ardour and courage. They are led in slips and loosed when they come upon the scent. Away they go, and the hunters, who follow more quietly, generally find the deer at bay and the hounds going gallantly into him. This is no joke, for the male *Kidang* makes a capital fight with his tusks, wounding his assailants severely, often fatally. "The sportsmen," says the Doctor, whose book is full of interesting passages, "uniformly are provided with remedies and applications, and by a simple suture attempt to unite those wounds which are not immediately fatal. In this operation they frequently succeed and preserve their most valuable dogs." But even this small care appears to be the exception to the rule. "The natives of Java, like other Mahommedans, entertain prejudices unfavourable to dogs; they rarely treat them with kindness, or allow them to approach their persons; and it is only in extraordinary instances, or when they contribute to their amusement, that they feed or care for them." To be sure, as a set off, they rarely show attachment to their masters, and no wonder; even Bill Sykes's dog could not carry his otherwise unqualified obedience to the length of getting over his very particular objection to being drowned.

On the other hand, the good dog-master considers his four-footed follower as his friend, his other self, his *duppelganger*, so that "Love me, love my dog," has passed into a proverb which has sometimes led to deadly results: we need only allude to the fatal duel between Colonel Montgomery and Captain Macnamara.

Nor can it be wondered at that a man should feel strongly for the faithful animal that distinguishes him from all others, an animal that may be a burr but is hardly ever a bore. Now and then, indeed, an ill-bred cur will, like Launce's Crab, thrust him-

self into the company of three or four gentlemanlike dogs; but your Biped Bore constantly and unrelentingly intrudes into a happy knot of mortals, not of his quality, who are shaking off the cares of life with a little joyous converse, till he has succeeded in reducing the gaiety that was flashing so brilliantly to a heap of ashes, and the merry tongues to a dead silence. Or he finds out when you are sick, and by an incomprehensible power possessed only by the typical Bore or Augur—not soothsayer—drills himself through all the doors barricaded against him, and having perforated to your sanctum preys upon you in your own arm-chair, giving you all the while, under colour of much pity, broad hints that you are "booked," and wimbling deeper and deeper still, till he has shattered the remains of your nerves to atoms; when, having absolutely devoured you in your shell, he leaves you a complete *caput mortuum* to go and finish with some other victim —the cannibal!

Why, why, is there not in our great clubs a power of reprobation as well as of election? Surely it would not be too much for twelve hundred men to have the power of excluding eight annually;—a power, by the way, which would be seldom exerted, for the very knowledge of its existence would have its effect, though it might be necessary now and then to eject some incorrigible pachydermatous bore *pour encourager les autres*. There is already a law prohibiting the entrance of our friends the dogs into those masculine establishments, a law which one is, at first, disposed to regard as harsh; but the reflection that most of the members of a club show no backwardness in availing themselves of its privileges, reconciles the mind to the inhospitable practice of making the worthy beasts sit in the porch, anxiously watching for the egress of their masters. Think of the assemblage of the doggies belonging to a thousand or twelve hundred masters, and the duels—the principals, to be sure, nowadays, never hit each other—which would spring out of the collision. Besides, they are not admitted at court, according to the old French quatrain—for which of their qualities we may not guess:

> "A la court les gros courtisans
> Sont ours, ou tygres, ou lyons;
> Les petits qui sont moins puissants
> Sont regnards ou caméléons."

But if they are not allowed to grace our assemblies within doors, there is no lack of them when men are gathered together under the canopy of heaven. At a fair, at a fight, at the most solemn spectacles; wherever, in short, there is a crowd, there are dogs to be seen, as a matter of course, apparently discussing the mat-

ter in hand, or inquiring of each new comer whether he had any thing to do with the embassy, and getting into little coteries and fights of their own; for, on these occasions, especially if there be a lady in the case, jealousies and suspicions do abound.

When the citizens feasted the allied sovereigns, we were snugly placed, at an early hour, at the window of a most worthy trader in the precious metals, upon Ludgate-hill; one who had been prime warden of the worshipful company, and had two gowns, and every thing handsome about him. His hospitable house was well filled with honest men and bonnie lasses, but we who had not been long in the small village, were constantly drawn from the well-spread table, and the bright eyes that surrounded it, to the window aforesaid, by the note of preparation. In the street were the heaps of gravel intended for smoothing the path of the Regent and the crowned heads. Workmen were employed in levelling these heaps which the dogs, already collected in considerable numbers, evidently considered as pitched exclusively for their accommodation. The thickening crowd were in their holyday suits, every thing was bright and gay, the dogs were frisky beyond expression, and the gravel heaps produced the most social feelings among the assembled quadrupeds.

By and by the gravel was spread—the dogs, that had been chasing each other's tails from an early hour, began to be a little tired, but were still in good spirits. The troops now lined the streets, and at length there seemed to be a disposition on the part of the dogs to consider that they had had enough of the fête. Every now and then, a canine sceptic, who began to think that matters were taking an unpleasant turn, would go to the sides of the street and try to make his way through the living wall that bounded the carriage-way. In nine cases out of ten he was kicked back by the soldiers, and if some particularly enterprising individual succeeded in passing them, a greater obstacle remained behind; for there was no possibility of getting through the conglomeration on the foot pavements: trampled upon by the crowd, and butt-ended by the soldiers, he was kicked back with curses into the arena, erst the scene of his gaiety, yelping and howling, and then and there immediately pitched into by his now hungry, peevish companions.

Well, the day wore on, the dogs lay down;—the usual cries, "They are coming!" brought every body from the creature-comforts to the windows, and the usual disappointments sent them back to their more substantial enjoyments. At last, the pealing and firing of bells announced the advent of the kings of the earth. Shouts were heard booming from the distance—the heads in the crammed windows were all craning westward,—the procession

was now coming in earnest. It was headed by a large body of distressed dogs, the phalanx increasing as it advanced. Worn out, kicked to death's door, and scarcely able to crawl, the miserable curs marched in solemn silence, with head depressed, and slinking tail, to which here and there might be seen appended the badge of the order of the tin canister or kettle. By the side there was no escape—they could not retreat, and so the dejected wretches marshalled the way, unwillingly and slow, till our country's honour, and that of Europe, were roofed in the Guildhall of the city of London.

Seeing these familiars, as we do, every where around us, and the infinite variety of form and colour exhibited among them, we are at once led to the inquiry whence they sprang,—what was the stock from which the canine family was derived? Your good cynogenealogist will trace out for you the pedigree of any particular race, and will be eloquent on King Charles's breed of spaniels, and the delicate Blenheim breed, nor will he not descant as learnedly as any historian of the turf on the Czarina, Snowball, or Claret blood, to him who loves "*The Couples*;" but, if you ask him who was the common ancestor, you may "pause for a reply." Ask the zoologists, and one will tell you that the jackal, with his unearthly cry and ghoul-like habits, that robber of the Asiatic and African grave, is the impure source of all that is quadrupedally good and amiable. Another, with more show of reason, will point to the gaunt wolf,

> "With his long gallop that can tire
> The hound's deep hate and hunter's fire;"

but it will be difficult to find one who will give you any authority for the existence of a primitive race of dogs, in the common acceptation of the term. Little osteological difference is to be detected in the dog, wolf, fox, or jackal: none, indeed, on which generic distinction can be founded with any degree of safety, and, therefore, no satisfactory evidence is forthcoming from the fossil canine animals, such as the *canis spelæus* of the Bone-caverns, the *canis giganteus* of Avary, and the *Agnotherium*, an animal of the dog-kind, as large as a lion, discovered at Epplesheim, by Professor Kaup. There is now ground for believing that Sir Roderick Murchison's fossil quadruped found at Œningen, was not a true fox.* The dog, the wolf, the jackal, and the fox, are all collected under the generic appellation, *canis*, by Linnæus, Cuvier, and other great zoologists; but the principal character assigned by the first of these philosophers to the domesticated dog, or *canis familiaris*,

* See Professor Owen's interesting paper "On the extinct Fossil Viverrine Fox of Œningen, showing its specific characters and affinities to the Family Viverridæ." Proceedings of the Geological Society, 1846, p. 55.

is "*cauda (sinistrorsum) recurvata*," "tail curled towards the left." There are, indeed, well-marked external differences between the four animals just mentioned, as every one knows, who has looked with any attention at them; and other distinctions will be detected on a closer examination. In the dogs properly so called, the pupil of the eye is round; this modification of the organization exists in the wolf and the jackal, and for this reason the African Fennec or Zerda is now associated with the true dogs; but the pupil of the eye in the foxes, whose habits are more nocturnal, is vertical. The wild dogs, as they are called—and we do not mean to say that they are improperly named—in whatever quarter of the world they are found, do not, in our opinion, help the question; indeed they have embarrassed it. Now there is evidence of the existence of the domesticated dog from the earliest times, and we see no sound reason for concluding that these wild races, some of which are well known to our Indian friends, and one of which has been named somewhat boldly, *canis primævus*, do not owe their origin to dogs which have been once under the subjection of man, partially at least, and have from circumstances taken to roving habits, and a natural state like the wild horses of America.

In pursuing this inquiry, it becomes of importance to ascertain in which of the supposed stocks we can trace the seeds of that affection for man,—yes, *affection* is the word,—that so highly distinguishes the dog. The jackal is altogether unamiable, and we know from the experiments of John Hunter, that though it will breed with the dog, the period of gestation is fifty-nine days. If the fox is looked to—we say nothing of an appeal to another of the senses—there does not appear any very inviting symptom to encourage us to make a fireside companion of *him*,

> "Who ne'er so tame, so cherish'd and lock'd up,
> Will have a wild trick of his ancestors."

Now, your wolf, truculent though he be, is capable of a most cordial attachment to man. We have seen one follow his master about with all the manners of a faithful dog, and doing his bidding as obediently. In the instance recorded by M. F. Cuvier, the wolf was brought up and treated like a young dog: he became familiar with every body whom he saw frequently, but he distinguished his master, was restless in his absence, and happy in his presence, acting almost precisely as a favourite dog would act. But his master was under the necessity of being absent for a time, and the unfortunate wolf was presented to the Ménagerie du Roi —where he was incarcerated in a den—he who had "affections, passions." Most disconsolate of wolves was he, poor fellow! he pined—he refused his food—but the persevering kindness of his

keepers had its effect upon his broken spirit, he became fond of them, and every body thought that his ancient attachment was obliterated. Eighteen long months had elapsed since his imprisonment, when his old master came to see him. The first word uttered by the man, who was mingled in the crowd, had a magical effect. The poor wolf instantly recognised him with the most joyous demonstrations, and being set at liberty fawned upon his old friend and caressed him in the most affecting manner. We wish we could end the story here; but our wolf was again shut up, and another separation brought with it sadness and sorrow. A dog was given to him as a companion, three years had elapsed since he last lost sight of the object of his early adoration, time had done much to soothe him, and his chum and he lived happily together—when the old master came again.

The "once familiar word" was uttered—the impatient cries of the faithful creature, and his eagerness to get to his master, went to the hearts of all, and when he was let out of his cage, and rushed to him, and with his feet on his shoulders, licked his face, redoubling his cries of joy, because he who had been lost was found, the eyes of bearded men, who stood by, were moistened. His keepers, to whom a moment before he had been all fondness, now endeavoured to remove him; but all the wolf was then aroused within him, and he turned upon them with furious menaces. Again the time came when the feelings of this unhappy animal were to be sharply tried. A third separation was effected. The gloom and sullenness of the wolf were of a more deep complexion, and his refusal of food more stubborn, so that his life appeared to be in danger. His health, indeed, if health it could be called, slowly returned, but he was morose and misanthropic, and though the fond wretch endured the caresses of his keepers, he became savage and dangerous to all others who approached him. Here was a noble temper ruined.

Nor are these the only instances of the disposition which is latent in these animals. The she-wolf mentioned by Mr. Bell, in his delightful "History of British Quadrupeds," would come to the front bars of her prison in the garden of the Zoological Society in the Regent's Park, to be noticed; and when she had pups, she would bring them forward in her mouth to be fondled; indeed, she was so pertinacious in her endeavours to introduce them into society, that she killed all her little ones, one after the other, by rubbing them against the bars, that they might be within reach of the caressing hand of man. It was as if the poor creature had said, "Do take me and mine out of this place and make pets of us."

When, therefore, we find this strong disposition for associating

with man, we are no longer startled at the views of those who regard the domestic dog, with all its varieties, as the descendant of the wolf. Let us look a little further into this point. As far as the skeleton is concerned, generally, there is hardly any difference, or very little, between the wolf and the dog, while the skull is almost exactly similar. The days of gestation in the bitch are sixty-three; precisely the same period is allotted to the wolf. The young of the domestic dog are born blind, as every body knows; those of the wolf come into the world in the same condition; and both first see the light at the same time, their eyes being opened on the tenth or twelfth day. In the wolf, as well as in the dog, the duration of life averages from fifteen to twenty years. It is true that the jackal, as well as the wolf, will breed with the dog; but we have no authority to prove that the offspring of the latter and the jackal is fertile, as that of the dog and wolf is. We do not think much of the principal difference between the two animals last mentioned, namely, the comparative obliquity in the position of the eyes of the wolf: domestication for a long series of years may have given a forward direction to those organs in the faithful follower of man. Then, if we look at the Dhole of India, the Dingo of Australia, and other wild or half-reclaimed races, we find the uniformity of colour, the tail, and somewhat of the general aspect of the wolf; indeed, one of the earliest English names for the Dingo was, *the New South Wales wolf*. It is also worthy of remark, that the wild dogs, and even those of the Esquimaux and Mackenzie River breeds, do not appear to bark, though, like the wolf, they may "behowl the moon." The Dingo sent over to Mr. Nepean, by Governor Phillip, and kept at Hatfield House by the Marchioness of Salisbury, neither barked nor growled. Ashkelli, a male Esquimaux dog, brought from the Polar Sea, by Mr. Richards, in Captain Parry's first voyage, though domesticated and good-humoured, seldom barked, according to Mr. Children, but, if displeased, uttered "a low wolfish growl." Mr. Bennett, in his account of the Mackenzie River, or Hare Indian dogs, presented to the Zoological Society by Captain Sir John Franklin, and Dr. Richardson, says, "In their native country they are never known to bark, and this peculiarity is still retained by the elder dogs; but the younger one, which was born in this country, has learned to imitate the language of his fellows," Now these dogs were particularly good-tempered and familiar with those who noticed them. Upon the whole evidence, we incline to the opinion of those who would derive the domestic dogs from the wolf; and though the former will hunt the latter, it should be remembered that dogs, with a very little encouragement, will also hunt one of their own undoubted race.

But from whatever source the dog be derived, he is one of the most sensible of four-footed animals. Gifted with a most retentive memory, he applies his power of observation to the regulation of his conduct so skilfully, that the result has very much the appearance of reasoning; if, indeed, it may not, without violence, be considered as the exercise of that faculty. His intellect, when well developed, is of no common order, and its constant activity is exhibited when, like the Fury in Æschylus, he

> "Opens in his sleep, on th' eager chase
> E'en then intent."

Our readers will, we hope, pardon us if we inflict on them a story or two in proof of our assertion.

We remember to have been once particularly struck with the behaviour of a dog that had lost his master. This, to us, is always a distressing sight, and enough, in our humble opinion, to have made Democritus himself look grave: but in the instance alluded to, there was food for reflection.

We were walking down a hilly field, whose path terminated at a stile which opened upon a road running due east and west. This road was cut at right angles by another road running northward. A dog passed with his nose close to the ground, keeping the downward path till he arrived at the stile, through which he squeezed himself, and, with his nose still down, he first hunted busily along the eastern branch, and then along the western. He now retraced his steps, and when he came nearly opposite to the northern road, he lifted his head, looked about him for a moment or two, and then set off along that road as fast as he could go, without again putting his nose to the ground, as who should think to himself—"he is not gone that way, nor is he gone *that* way, therefore he must have gone this way"—an operation of the mind very like a syllogism.

Then there is the well-authenticated story of the dog that was left, in December, 1784, by a smuggling vessel, near Boomer, on the coast of Northumberland; and we shall let Bewick, who records the fact, tell his own tale.

"Finding himself deserted," continues Bewick, speaking of the abandoned dog, "he began to worry sheep, and did so much damage, that he became the terror of the country within a circuit of twenty miles. We are assured that when he caught a sheep, he bit a hole in its right side, and, after eating the tallow about the kidnies, left it: several of them thus lacerated, were found alive by the shepherds, and, being taken proper care of, some of them recovered, and afterwards had lambs. From his delicacy in this respect, the destruction he made may in some measure be

conceived; as it may be supposed that the fat of one sheep in a day would not satisfy his hunger. The farmers were so much alarmed by his depredations, that various means were used for his destruction. They frequently pursued him with hounds, greyhounds, &c.; but when the dogs came up with him, he laid down on his back, as if supplicating for mercy; and in this position they never hurt him; he therefore laid quietly, taking his rest till the hunters approached, when he made off without being followed by the hounds, till they were again excited to the pursuit, which always terminated unsuccessfully. It is worthy of notice, that he was one day pursued from Howick to upwards of thirty miles distance, but returned thither and killed sheep the same evening. His constant residence during the day, was upon a rock on the Heughhill, near Howick, *where he had a view of four roads that approached it;* and in March, 1785, after many fruitless attempts, he was at last shot there."

Now, to say nothing of the *ruse* whereby he regularly saved himself from his pursuers, this was very like communing with himself, and, as a result, taking up the best possible position for his security under existing circumstances, a position which enabled him to baffle his enemies for upwards of a year:—what is this if it be not reason?

One more illustration of this part of our subject. In the West of England, not far from Bath, there lived, towards the close of the last century, a worthy clergyman, who was as benevolent as he was learned. There were turnspits in those days—a most intelligent set they were, and Toby, who was an especial favourite, was a model of the breed, with legs worthy of the *Gow Chrom* himself, upon which he waddled after his master every where, sometimes not a little to his annoyance; but Toby was a worthy, and he could not find it in his heart to snub him. Things, however, came at last to such a pass, that Toby contrived somehow or other to find his way to the reading-desk on a Sunday, and when the door was opened, he would whip in, well knowing that his reverend patron was too kind and too decorous to whip him out. Now, though it has been said, that

"He's a good dog that goes to church,"

the exemplary Dr. B., who thought he had traced a smile upon the countenance of some of his parishioners on these occasions, felt the impropriety of the proceeding: so Toby was locked up in the stable on Sunday morning; all to no purpose, however, for he scrambled through the shut window, glass, lead and all, and trotted up the aisle after his annoyed master as usual. Matters were now getting serious; so as soon as he had on the

Saturday caused the beef to revolve to a turn which was to be served cold for the Sunday dinner—for the good man chose that all around him should find the sabbath a day of rest—Toby was taken out of the wheel, and his dinner was given to him; but instead of being allowed to go at large to take his evening walk after it, Molly, to make sure of him, took him up by the neck, and putting him into the wood-hole where window there was none, drew the bolt, and left him therein. Toby revenged himself by "drying up the souls" of the whole family with his inordinate expostulatory yells during the whole of the remnant of Saturday and the greater part of Sunday. However, there was no Toby dogging the heels of the surpliced minister, and it was concluded that the sufferings that the doggie and the family had undergone, would have their effect. Well, the week wore on, Toby as amiable and as useful as ever, without a particle of sullenness about him—into the wheel went he right cheerfully, and made it turn more merrily than ever; in short, parlour, kitchen, and all were loud in his praise. However, as it drew towards twelve o'clock on the Saturday, Toby was missed. Poor Molly, the cook, was at her wit's end.

"Where's that vexatious turnspit gone?"

was the question, and nobody could answer it. The boy who cleaned the knives was despatched to a distant barn where Toby was occasionally wont to recreate himself after his culinary labours, by hunting rats. No—no Toby. The sturdy thrashers, with whom he used sometimes to go home under the idea, as it was supposed, that they were the lords of the rat-preserve in the barn, and who being fond of Toby in common with the whole village, used occasionally to give him

"A bit of their supper, a bit of their bed,"

knew nothing of him. Great was the consternation at the Rectory. Hints were thrown out that "The Tramps" in the green lane had secreted him with the worst intentions, for he was plump and sleek, but their camp was searched in vain. The worthy family retired for the night, all mourning for Toby: and we believe there is no doubt that when the reverend master of the house came down on Sunday morning his first question was, "Any tidings of Toby?"—A melancholy "No, sir," was the answer. After an early breakfast, the village schools were heard—their rewards distributed, not without inquiries for Toby—and when church-time came, it is said that the rector, who walked the short distance in full canonicals, looked over his shoulder more than once. He passed through the respectful country-people collected

in the little green grave-yard, who looked up to him as their pastor and friend, he entered the low-roofed old Norman porch overhung with ivy, he walked up the aisle, the well-filled pews on either side bearing testimony that his sober-minded flock hungered not for the excitement of fanaticism, he entered the reading-desk, and as he was adjusting his hassock, caught the eye of Toby twinkling at him out of the darkest corner. Need we say more, than that after this, Toby was permitted to go to church, with the unanimous approbation of the parish, as long as he lived. Now if this was not *calculation* on the part of Toby, we know not what else to term it, and we could refer our readers to well-authenticated stories *in print*—as our dear old nurse used to say when she was determined to silence all incredulity—that go as far, and even farther, to show that these animals can calculate intervals of time.

It is this intellectuality, joined with their individuality—for no two dogs are alike—that makes them such admirable subjects for the gifted hand of Edwin Landseer. It is said that dogs have been taught to utter, after a fashion, one or two simple words, not exceeding two syllables; however this may be, no one, we apprehend, who has seen *The Twa Dogs* can doubt that they converse. When we "look around the walls," as the patronizing orators say at the annual festival in Trafalgar-square, and catch the Promethean fire infused into the portrait of *A Respectable Member of the Humane Society* and others, his fellows, we suspect that a few of the gentlemen—ay, and ladies too—who have paid for having their faces mapped and hung on those same "walls," sigh occasionally as their eyes rest on the beautifully characterized doggies, and feel an irresistible preference for the Cynic school. The Mahommedans were forbidden to represent either man or other animals; and the prohibition, if we mistake not, arose from a tradition that those who are hardy enough to make the attempt will be called upon, hereafter, to put a soul into every one of their representations—or else—: if there be any foundation for this creed, what an awful future awaits some of our exhibiters.

Another consequence of the intellect manifest in our friends, the dogs, and the almost human affections that belong to them, is, that superstition has conferred upon them a sort of immortality. To say nothing of "Cerberus," of the poor Indians "equal sky," or the "Tomalins," and other black-dog familiars of the ages of witchcraft, we have the Mauthe Doog of the Manksman, the Fiend Hünd of Faust, and the Hell-hound of Britain. As the dog was supposed to be gifted with the power of seeing spirits when they were invisible to man, it is no wonder that we have spectre-hounds, or that our ghostly enemy himself should have been sup-

posed in those dark and disgraceful times to which we have alluded, to have condescended to put on the shape of the most sagacious of four-footed beings, one that the ancient Egyptians worshipped as a god.

The variety of form and colour in the races of dogs is infinite. Contrast the mastiff with the spaniel—place the St. Bernard dog—the great Thibet watch-dog—that of Spain, or the gallant Scotch deerhound, by the side of our rector's Toby, or one of that curious family of French—not Dutch—pugs, and it seems almost incredible that they should be all of one species. Yet the most acute observers have failed, and, in our opinion, always will fail, to seize on any character which shall be found to warrant specific distinction.

We have heard the little French dogs, above mentioned, libelled as being useless; but they have very winning ways, and gain upon you, till they almost become little friends. The great luxury of their life seems to consist in being nursed in the lap,—that of a lady for choice,—and for this they will sit up, and beg as pertinaciously, as other dogs will for food. The hound has been sung in every language since Cadmus taught his dragon-lads the alphabet. The bloodhound, and the greyhound, have been immortalized by our best poets, ancient and modern; a Newfoundland dog was the friend of Byron, and Scott had his Maida. There is hardly a great dog, from that of Ulysses downwards, that has not had his eulogist; but these little dogs are a despised generation, and though they may suffer by our pen, we venture a word or two, by way of introducing them to our readers, the more especially as none of them appear to have sat to Edwin. If they had, we would gladly have left their character in his hands. Very fine neat limbs, very high foreheads, prominent expressive eyes, long ears, which they erect, so as to look a little like Fennecs, a tight-curled tail, and a very close fine coat, are their characteristics: the true-bred and handsome ones show a great deal of blood. They are most intelligent and affectionate, and understand in a very short time whether the conversation relates to them, though not addressed to them, nor carried on in an altered tone—as indeed is the case with most sensible dogs.

It was amusing to see three of these little dogs in company with Rundy, a beautiful beagle, especially when a splendid fellow of a French pointer was occasionally admitted into the party. The well-educated pointer, who could do every thing but talk as they say, was ordered into a chair, where he sat with a most becoming gravity, and there, wrapped in a cloak, and with his foraging cap, jauntingly cocked over one eye, and a roll of paper in his mouth for a cigar, he looked much more manly than the whey-

faced bipeds who pollute our streets and add their mouthful of foul smoke to "the fog and filthy air" of this reeking town. When the little lapless dogs on the carpet saw this, they would surround his chair, sitting up in the usual begging position, and hoping, apparently, that among his other accomplishments, he had learned the all-soothing art of nursing. Rundy generally took this opportunity of securing the best place on the rug, where he lay stretched out on his side, before the fire. The suppliants finding that the Frenchman in the chair made no sign, and that they could produce no impression on the flinty hearts of the rest of the company, to each of whom, in succession they had sat up, adjourned one after the other, and after sitting up for a moment to the recumbent Rundy, sat down upon him, looking, as a friend once said, like a coroner's jury sitting on the body; and indeed, Rundy, who was good-tempered and used to the operation, lay as still as if he had been no longer of this world. They seemed to have the greatest objection to resting on the floor, richly Turkey-carpeted though it was. When they were thus seated looking at the fire, with their backs to the company, the words, "Well, you may come," uttered without any particular emphasis, would bring them all in a moment bounding into the laps of the speakers. At night they were always on the look out for a friend who would take them to bed, otherwise the mat was their portion. At the well-known "*au lit, au lit,*" they would rush from the snuggest of laps, and gambol before you to your bedroom. As soon as they entered it and were told, "you may go into bed," they would creep in between the sheets at the top, and work their way down to the bottom, where they would lie all night at your feet, without moving, unless a particularly favoured Lilliputian was permitted to come up and lay its head on the pillow or your arm.

That these faithful creatures should be subject to the most frightful and fatal of diseases—a disease which they too frequently communicate in their madness to their beloved master or mistress, is one of those inscrutable dispensations that sets all our philosophy at nought.

The chamber of a human being, writhing under hydrophobia, is a scene never to be forgotten by those who have had the misfortune to witness it. There lies the wretched victim under a certain sentence of death—death the most dreadful! His unsteady glistening eye wanders over the anxious faces that surround him; the presence of any liquid—the noise of pouring it out—a polished surface—or anything that suggests the idea of it—even the sudden admission of a cold current of air, bring on the most agonizing paroxysms of spasm in the throat. Oh! to see him strong in

resolution, determined to make the rebel muscles obedient—to see and hear him

"Struggle with the rising fits,"

and sit up and say that he *will* take his medicine. And there he is, apparently calm—the attendant approaches with the cup—he receives it—you almost think, so much does he seem to have his nerves under command, that he will drain it. He lifts it to his parched lips, his haggard eye rolls, the rising spasms overpower him—"I can't," he faintly utters, and falls back in agony. We dare not go on: it is too horrible!

But we may point out, especially as there is a good deal of misunderstanding upon the subject, the usual symptoms that denote the rabid dog; for it frequently happens that a dog is destroyed as mad, when he has no disease of the kind about him; whilst, on the other hand, the rabid animal is often suffered to live and deal destruction around. It is an error to suppose that a mad dog always shows aversion to water, as the name of the disease implies; he will, on the contrary, sometimes lap it—nay, swim across a river without manifesting any of the horror that marks the disease in man. The most sure symptom is a complete alteration of temper from the mild and the familiar to the sullen and the snarling; he snaps at all objects animate and inanimate, and gnaws them. Even in this state his behaviour often continues unaltered to his master or mistress; and hence the cases which have arisen from having been licked by the tongue of such a dog, on some part of the face or hands where the skin had been broken. Though he goes wildly about, apparently without an object, foaming at the mouth generally, and snapping as he proceeds, he rarely gallops, but mostly keeps to a sullen trot with his tail down. The best representation of this mad gait that we have seen, is in "Bewick's Quadrupeds," where the vignette at p. 330, of the edition of 1820, gives a very correct idea of the rabid animal in its progress.

What produces this cruel disease in the dog, is a mystery: it can hardly be hardship or ill-treatment, for it frequently happens to pets

"Bred with all the care
That waits upon a fav'rite heir."

Just see what Sonnini says of the dogs at Rosetta, where, though "repelled by man, to whose personal use nature seems to have destined them, they are, nevertheless, incapable of deserting him." In modern Egypt the dog is considered an unclean beast, not to be touched without subsequent purification, and, therefore,

carefully shunned by the Mahommedans. "There are few cities in the world," writes Sonnini, "which contain so many dogs as those of Egypt; or at least, there is no one which has the appearance of containing more, because they are there constantly assembled in the streets, their only habitation. There they have no other supplies of food but what they can pick up at the doors of houses, or scramble for by raking into filth and garbage. The females drop their young at the corner of some retired and unfrequented street; for a disciple of Mahomet would not permit them to approach his habitation. Continually exposed to the cruel treatment of the populace; massacred sometimes without mercy by an armed mob; subjected to all the inclemency of the elements; hardly finding the means of supporting a wretched existence; meager; irritated to madness; frequently eaten up by a mange which degenerates into a species of leprosy; hideous even from the forlornness of their condition; those miserable animals inspire as much compassion, as they excite contempt and indignation against the barbarians among whom they live. It is undoubtedly astonishing that amidst a life of misery and suffering, many of those dogs should not be subject to attacks of the hydrophobia. But this malady, rare in the northern parts of Turkey, is still more so in the southern provinces of that empire, and is totally unknown under the burning sky of Egypt. I never saw a single instance of it; and the natives whom I consulted on the subject, had not so much as an idea of the disease."

We willingly drop this distressing part of our subject; but we must not conceal that though hydrophobia generally makes its appearance in man between the thirtieth and fortieth days after the communication of the virus, fatal cases that have occurred after a lapse of eighteen months are on record; and there is not wanting high authority for the assertion that a person cannot be considered perfectly safe till two years at least have passed, reckoning from the time when the injury was received.

CAT'S.

"I come, Graymalkin!"

MACBETH.

If dogs are the friends of mankind; their companions in their walks, and their partners in the pleasures of the chase, cats may be considered as the chosen allies of womankind. Not that the sterner sex have not shown as much fondness for these luxurious quadrupeds as the ladies have exhibited, ay, even those who cradle the blind offspring of their Selimas, and adorn the pensive mother's neck with coral beads. Mahomet, Montaigne, Richelieu, and Johnson, were not exactly simpletons, though it might be difficult to make a modern dandy understand the kindness of heart that sent the lexicographer out to purchase oysters for his favourite Hodge, when he was old and sick, and fancied no other food.

When we reflect that these purring associates of the Englishman's fireside are so closely connected with the untranslatable word "comfort"—a word that has neither name nor representation out of this "nook-shotten isle," and its snuggeries of sea-coal and hearth-rugs with which their satisfactory song harmonizes so soothingly; that they are the guardians of the store-room, the larder, the dairy, and the granary; that they

> "Watch o'er the weal of Rhedycinian cheese;
> And melting marble of collegiate brawn
> For heads of houses guard, and lords in lawn;"

we are led to inquire the cause of the hatred, even where no antipathy exists, which rages against this maligned and persecuted race. The gardener and the gamekeeper, the latter especially, have some grounds for their deadly enmity; the schoolboy too often looks upon them as having been brought into the world for the express purpose of being shod with walnut-shells, thrown off the church tower with blown bladders tied to their necks, sent to

navigate the horsepond in a bowl, there to withstand the attacks of a fleet of water-dogs, and, finally, killed by his terrier;* whilst

* We cannot resist the temptation of recording a case of tempered schoolboy vengeance. Some few years ago, horticulture was the fashion, not to say passion, at a certain school; and the master thinking, wisely enough, that the boys might have worse pursuits, encouraged the zeal with which they cultivated their little gardens. Whether any of these horticulturists afterwards belonged to the agricultural society of a celebrated college in one of our universities, whose members, in their zeal for improvement, one fine night ploughed up the lawn in the middle of the quad with sofas, and planted the Principal out of his own chapel, with shrubs and trees transplanted from his own garden, does not appear; the schoolboys, at all events, dibbled, and delved, and sowed, and weeded, and were kept out of mischief. But who shall reckon upon happiness? There was a tremendous bluff-visaged, dark-coloured tabby cat, belonging to a little spiteful tailor, who lived hard by. This provoking beast nightly tore up their crocuses, polyanthuses, and hyacinths, and laid low whole rows of mustard and cress: nor was there not a suspicion that in the destruction of the last-mentioned articles puss was assisted by his master; for though the flowers were prostrate, the esculents for the most part vanished altogether. The boys went up in a body with a complaint to him of the shears, reciting the damage done, and warning him that he should keep his cat at home at night. Their just indignation was treated with derision by the little tailor, who received the remonstrance seated at his door, pipe in mouth. Two or three of the strongest of the youths were for executing summary justice on the irritating *schneider*, and quenching him and his pipe together at the pump; but they were restrained by a sage among them, who, looking unutterable things at the smoker, informed him that he had better look out, or he would not know his cat again when he saw it, and left him in no very comfortable state of mind.

After the exhibition of much ingenuity and many failures, the trespasser was, at last, caught, bagged, and carried into a room, where a convention of outraged gardeners immediately proceeded to consult upon his doom. Two or three of the greatest sufferers loudly gave their voices for death: others were for sparing his life, but curtailing his tail of its fair proportions, and otherwise maltreating him so that he should never be the same cat again. At length the sage, who was merciful but determined, begged to be heard. He said that the tailor was in fault more than the cat, which did but after its kind in frequenting gardens, if suffered to go abroad at night; and as he had by him some of the best *fyn zegellak* (*wel brand en vast houd*) for electrical experiments, he proposed to make the unhappy bagster a warning to all tailors to keep their cats from wandering. He explained his plan, which was adopted *nem con.*, and having dissolved sealingwax *quant suff.* in spirit of wine, dipped a brush therein; and while two assistants, who were bit and scratched worse than Hogarth's actress in the barn, held the victim, painted the struggling Tommy all over of a bright vermilion, with a masterly hand. The *tableau vivant* was then set down, and home he bolted in the gloaming. How the cat entered the tailor's house, and what the tailor thought of the advent, no one knew; but it was observed that the tailor's hair became rather suddenly gray. For two days nobody saw either him or his cat. On the third, he, remembering the threat of the philosophic gardener, walked into the schoolroom, at high school-time, with his vermilion quadruped under his arm, held him up before the master, and asked, with a solemn voice and manner, "if that

the murderous cat-skinner only sees in them subjects appointed to be flayed alive. These are their open and avowed foes: their secret enemies are scarcely less numerous. Why is this?

The answer may be, perhaps, found in a dark and disgraceful portion of the criminal annals of this country, of which more anon.

But we must first say a word or two, touching the natural history of this familiar beast: no easy task; for the origin of the house cat, like that of many other of our domestic animals, has puzzled the learned; and the stock from whence it sprung, is still, in the opinion of some, a problem for the zoologist to solve.

That the cat was domesticated among the Egyptians, we have pregnant evidence, not only in their custom of shaving their brows when their cats died a natural death, but also in the mummies found in their catacombs* (no pun meant), and in the figures of these animals on the monuments of that ancient country,—perched on the top of the Sistrum, for instance, and supposed to represent the moon—probably from the following mythological legends.

Jove, tired of state affairs and Juno's tongue, sought, one day, a little relaxation in the company of his pretty Latona twins, Apollo and Hecate. To amuse them, he bade them try their hand at creation, and do something towards filling the empty globule, now called earth. Apollo set his wits to work, and produced MAN. No one likes to be outdone; so, as Diana saw at a glance that there was no going beyond her brother's handiwork, she tried to turn the laugh against him, and concocted a sort of H.B. of her brother's production, in the form of an ape. No one likes to be laughed at: so Pol cut his sister's fun rather short, by turning up a ramping lion. Di, however, was not to be frightened, and played another card of ridicule in the shape of a cat. Apollo, upon this, got into good humour, and, determined to beat his lively antagonist at her own weapons, made a mouse,—which Hecate's cat immediately ate up. The lovely sex always have it hollow in matters of finesse.

Her success at this game seems to have pleased the Goddess of Wisdom: for when Typhon and his giant host pressed the gods so hard, that they were compelled to flee into Egypt, and save

was the way a cat ought to be treated?" The master, who was taken by surprise, burst out into a fit of laughter, in which he was, of course, joined by the boys. The crest-fallen tailor, without staying further to question, turned round, and with the port of a much-injured man, walked out with his rubicund cat under his arm, as he had walked in.

* Herod. II., c. 66, 67.

themselves from his fury, by shooting their souls into the bodies of quadrupeds and birds, she chose the form of a cat for her metamorphosis, whilst her brother was glad to escape into the person of a crow, and her papa into the woolly carcass of a ram.

No, say others, *that* is a fable; but the reason why the cat was sacred to Hecate is this: The triple night consequent on Jupiter's visit to Alcmena, set all Olympus a wondering; and it was not long before Juno, whose acuteness was not suffered to become dull for want of exercise, soon discovered the *liaison*. The months rolled on. The Queen of Heaven sent for the Parcæ, and gave them her imperial orders, which they sternly obeyed, and poor Alcmena had a weary time of it. Her gossip, Galanthis, after scolding, beseeching, and saying and doing all that a kind woman, almost at her wit's end, from witnessing the agonies of her bosom friend, could, to make an impression on their stony hearts, had recourse to a little deception. She persuaded the Fates and Lucina, that it was the will of Jove that Hercules should be born. They believed her, dissolved the spell,

"And made that lady light of her sons."

The good Galanthis, however, paid dearly for her friendly *ruse*: she had provoked the fiercest of all vengeance—that of a deceived Queen, and was turned into a cat.* Hecate, though a bit of a prude, was so struck with commiseration, that she chose the metamorphosed dame as her consecrated attendant. Accordingly it was said that the number of the cat's offspring was a gradual progression—one, two, three, four, and so on, always augmenting, till a litter of seven was produced, and the total amounted to twenty-eight, the days of a lunation, and that the pupil of the cat's luminous eye dilated and diminished as the moon waxed or waned.

Leaving the mythologists to settle the question how Hecate and the cat became associated—a connexion, which, at one dismal period, many were made to rue, we must return to Egypt, where, without doubt, the cat was domesticated. Thence it may have come to the Greeks, and from them to the Romans, and from the Romans to the rest of the world, as far as their empire extended.

* There is another version, setting forth how Galanthis was turned into a weazel by Lucina, who, delegated by Juno, sat near the door of Alcmena's house, with her legs crossed and her fingers joined, in the form of an old woman. Galanthis, suspecting Juno's jealousy, and that the cross-legged old woman was the cause of Alcmena's protracted pain, rushed out of the house with a joyful countenance and informed the crone that the birth had taken place. Whereupon Lucina uncrossed her legs and loosed her fingers, when Hercules and Iphicles were immediately born.

But why seek so far, when in your indigenous wild-cat, you may find the ancestor of the playful house-kitten that now chases the straw which you draw before it?

So thought Linnæus, Pennant, and Cuvier.

In opposition to this high authority, are arranged the following reasons, historical and zoological:

By the laws of *Howel dda* (Howel the Good) who died in the year 948, after a reign of thirty-three years over South Wales, and eight years over the whole of the principality, the price of a kitling before it could see, was to be a penny; till it caught a mouse, twopence; and when it commenced mouser, fourpence; but then it was a *sine quâ non* that it should be perfect in its senses of hearing and seeing, be a good mouser, a good nurse, and have the claws entire. If there happened to be a failure in these essentials, the vendor was to forfeit a third of its value to the vendee. Again; he who stole or killed the cat that guarded the prince's granary, was to forfeit a milch ewe, its fleece and lamb; or as much wheat as when poured on the cat suspended by its tail (the head touching the floor), would form a heap high enough to cover the tip of the tail.*

Pennant, who quotes these laws in his *British Zoology* (1777), observes, that this evidence almost proves to a demonstration, that cats were not *aborigines* of these islands, nor known to the earliest inhabitants; and yet in his *Synopsis of Quadrupeds* (1771), and in his *History of Quadrupeds* (3d edition, 1793), he makes the wild cat of these islands, and of the woods of most parts of Europe, the stock of the domestic variety, and, in the very same work that contains the observation above quoted, says, speaking of the wild cat, "This animal does not differ specifically from the tame cat; the latter being originally of the same kind, but altered in colour and in some other trifling accidents, as are common to animals reclaimed from the woods and domesticated."

Now, though domestication will do a great deal in modifying form and colour, there are some points of difference between the true wild cat and tame cats, which are well worthy of notice.

The wild cat is described by Pennant, as being three or four times as large as the house cat. The teeth and claws are, to use his expression, "tremendous," and the animal is altogether more robust. Domestication does not, generally, diminish the size of animals; on the contrary, it is the experience of every day that the tendency is of an opposite quality, unless the care of the breeder be directed to secure a comparatively minute race; as, for example,

* Leges Wallicæ.

in the case of Bantam fowls and lap-dogs. The tail of the wild cat is stout and as large at the extremity, as it is in the middle and at its insertion, if not larger; that of the house cat tapers from the base to the tip. Though colour is but a treacherous guide, it should not pass unnoticed that the tail of the wild cat always terminates in a black tuft.

Well; but the house cat will breed with the wild cat, and the offspring will be fruitful. Even if this were satisfactorily proved, it would not, in our opinion, be entirely conclusive: most of the so-called wild cats, however, are merely house cats, which have left their homes, or whose homes have left them, and which have taken to a vagabond and marauding life. Place one of these vagrant cats by the side of a real Scottish wild cat, and you will soon perceive the difference. The latter looks like a stout dwarf tiger; and his trenchant teeth, broad foot, and powerful claws, well justify the motto of the Clan Chattan, "Touch not the cat but* the glove."

Dr. Rüppell discovered in Nubia a cat (*felis maniculata*), and M. Temminck agrees with the doctor in thinking that this is the stock from which the Egyptian and our domestic cats sprang. It is one-third smaller than the European wild cat, and the proportions of the limbs are more delicate; indeed, Dr. Rüppell calls it *kleinpfötige katze*, but its tail is longer. Its stature is about that of a middle-sized house cat. He found it in the craggy and bushy country near Ambukol, west of the Nile, and, on comparing a specimen with the skeleton of a cat's mummy, the latter agreed with the former in the size of the body, the shape of the head, and the length of the tail. On this and other evidence, Dr. Rüppell comes to the conclusion that his *felis maniculata* is descended from the domestic cat of the Egyptians.

Sir William Jardine concurs with Dr. Rüppell and M. Temminck; but Mr. Bell, and his opinion is worthy of all respect, differs from them, principally upon the ground that the tail of *felis maniculata*, instead of being taper, like that of our house cat, terminates in a thickened and tufted extremity, although it is somewhat slender in the greater part of its length. The ears, too, Mr. Bell observes, are much longer and broader, and the legs are longer and more slender.

"Who shall decide, when doctors disagree?"

We have seen how the cat is associated with Hecate; and we accordingly find it acting a conspicuous part in witchcraft.

* Without.

The expostulating tabby, in Gay's Fables, says to the old beldame,

> "'Tis infamy to serve a hag,
> Cats are thought imps, her broom a nag;
> And boys against our lives combine,
> Because, 'tis said, your cats have nine."

The cat probably owes this reputation of a ninefold vitality, not only to its extraordinary endurance of violence, and its recovery from injuries which, frequently, leave it for dead; but also to the belief that a witch was empowered to take on her a cat's body nine times.

Absurd as these fancies now appear to us, they become matter of grave and even painful interest, if considered as to their effect on the manners of the time when the belief in witchcraft was rife, and when hundreds of wretched old women, in these islands alone, were sent out of life "in a red gown" (the slang of that day for being "burnt quick" or alive), after undergoing the most excruciating tortures to make them confess the impossibilities for which they suffered. The smile that rises upon reading these absurdities is changed to the frown of horror and execration at the fate of these unhappy creatures, and the stupid zeal of their prosecutors.

Our gentle King Jamie, the great *malleus maleficarum* was, naturally enough, supposed to be the special object of the wrath of the whole sisterhood, and, accordingly, we find that on his return from Denmark, in 1590, all the powers of darkness were in league to prevent the completion of his matrimonial union with the princess of that state. Whilst a favouring gale forwarded the rest of the fleet, the royal pair were vexed with storms, and the ship that carried the queen sprang a leak. Nor was the mischief confined to royalty, for the loss of a passage-boat between Leith and Kinghorn was attributed to the war of elements raised on this occasion. Here is a specimen of one of these conjurations:

"Agnes Sampsoun, Jonnet Campbell, Johnne Fean, Geilie Duncane, and Meg Dyn, baptesit ane catt in the wobster's* hous, in the maner following: First, twa of thame held ane fingar in the ane syd of the chimnay cruik; and ane vther held ane vther fingar in the vther syde, the twa nebbis† of the fingaris meting togidder. Than they patt the catt thryis throw the lynkis of the cruik, and passet it thryis vnder the chimnay. Thaireftir at Beigie Todis hous, thay knitt to the foure feit of the catt foure jountis‡ of men: quhilk being done, the said Jonet fetchit it to Leith; and about midnicht, she, and twa Luikehop,§ and twa wyfeis callit Stobeis, came to the peir heid, and saying thir wordis, 'see that thair be na desait amang ws,' and thay caist

* Weaver's.
† Extremities.
‡ Joints.
§ Two persons of that name.

the catt in the see, sa far as thay mycht, quhilk swam owre and cam agane: and thay that war in the panis, caist in an vther catt in the see at xi houris, efter quhilk, be thair sorcerie and inchantmentis, the boit perischit betuix Leith and Kinghorne."*

We also find in an old pamplet (1591) "Newes from Scotland, &c. &c. &c.," the following version of an enchantment on the same occasion:

"Moreover she confessed that she took a cat and christened it, &c. &c., and that in the night following, the said cat was conveyed into the middest of the sea by all these witches sayling in their riddles, or cives,† and so left the said cat right before the towne of Leith in Scotland. This doone, there did arise such a tempest at sea, as a greater hath not been seen, &c."—"Againe, it is confessed that the said christened cat was the cause of the Kinges Majestie's shippe, at his comming forthe of Denmarke, had a contrarie winde to the rest of the shippes then being in his companie, which thing was most straunge and true, as the Kinges Majestie acknowledgeth, for when the rest of the shippes had a fair and good winde, then was the winde contrarie, and altogether against his Majestie, &c."

Nor was this an unconvivial expedition; for "they together went to sea, each one in a riddle or cive, and went in the same very substantially with flaggons of wine, making merrie, and drinking by the way in the same riddles or cives."

In 1594 we find a convocation of sorcerers assembled at Seaton Thorn christening a cat, and making the poor beast an oblation to Satan; and this also stated in a criminal trial.‡

Isobell Griersoun§ had, it seems, a grudge against Adam Clark, and to feed it fat, she "in the liknes of her awin catt, accompanied with ane grit number of vther cattis, in ane devillish maner enterit within the hous quhair thay maid ane grit and feirful noyis and truble, quhairby the said Adam, then lying in his bed, with his wyfe and sêruand, apprehendit sic ane grit feir that thay wer liklie to gang mad." Another witch lady was seen making her escape by "ane hole in the ruife," and another stated that she was among "the cattis that onbesett him." In short, it was the favourite shape in which the witches played their pranks.

> "Under the cradle I did creep
> By day, and when the child was asleep
> At night, I suck'd the breath and rose
> And plucked the nodding nurse by the nose.

Even in our own times we have seen a good old nurse drive a cat out of the room with much significance of manner, that it might not "suck the child's breath;" nor is such caution to be wondered at, when it was the fashionable form for the witches to

* Trial of Agnes Sampsoun, 1590. † "In a sieve I'll thither sail."—MACBETH.
‡ Trial of Beigis Tod, May, 1608. § Tried in 1607.

appear in at their sabbath. It is recorded of Fontenelle, that he confessed to having been brought up in the belief, that all the cats deserted their dwellings on the Eve of St. John, to hie them to the infernal assembly.

But, as far as our islands were concerned, such gross superstitions and disgraceful trials as we have noticed, were not confined to Scotland. The following depositions of Matthew Hopkins, Gent., appear in an old tract (1645) intituled, "A true and exact relation of the severall informations, examinations, and confessions of the late witches, arraigned and executed in the county of *Essex*. Who were arraigned and condemned at the late sessions, holden at *Chelmesford* before the Right Honorable Robert, Earl of *Warwicke*, and severall of his majesties justices of peace, the 29 of *July*, 1645. Wherein the several murthers and devillish witchcrafts, committed on the bodies of men, women, and children, and divers cattell, are fully discovered. *Published by Authoritie*."

The informations appear to have been taken before "Sir Harbottell Grimston, Knight and Baronet, one of the Members of the Honourable House of Commons: and Sir Thomas Bowes, Knight, another of his majesties justices of the peace for the county."

The first informant is "John Rivit, of Mannintree, Tayler; who, on the 21st March, 1645, deposes that about Christmas last, his wife was taken sick and lame, with such violent fits that he verily conceived her sickness was something more than merely natural; whereupon, about a fortnight since, he went to a cunning woman, the wife of one Hovye, at Hadleigh in Suffolk, who told him that his wife was cursed by two women who were his near neighbours, the one dwelling a little above his house and the other beneath his house (which stood on the side of a hill), whereupon he believed his said wife was bewitched by one Elizabeth Clarke, alias Bedingfield, that dwelt above his house, 'for that the said Elizabeths mother and some other of her kingsfolke did suffer death for witchcraft and murther.'"

The tailor having laid this very satisfactory and sure foundation on the 21st, Hopkins the witchfinder, who lived by his nefarious trade, and had doubtless either got scent of the case or had been apprized of it by the Manningtree sages, makes his appearance on the 25th. The scoundrel's deposition would suffer by more curtailment than is absolutely necessary, and therefore we give it as far as we can in his own words.

"This informant saith, that the said Elizabeth Clarke (suspected for a witch as aforesaid) being by the appointment of the said justices watched certaine nights, for the better discovery of her wicked practises, this informant came into the roome where the said Elizabeth was watched as aforesaid, the last night,

being the 24th of this instant March, but intended not to have stayed long there. But the said Elizabeth forthwith told this informant and one Master Sterne there present, if they would stay and do the said Elizabeth no hurt, shee would call one of her white impes and play with it in her lap; but this informant told her, they would not allow of it; and that staying there a while longer, the said Elizabeth confessed"—(Here follows an alleged confession, the particulars of which we must omit; suffice it that the prince of darkness is not made to possess the most refined taste, though it is stated that he appeared "in the shape of a proper gentleman with a laced band.") The deposition then goes on: "And within a quarter of an houre after there appeared an impe like to a dog, which was white, with some sandy spots, and seemed to be very fat and plumpe, with very short legges, who forthwith vanished away; and the said Elizabeth said the name of that impe was *Jarmara*: and immediately there appeared another impe, which shee called *Vinegar Tom*, in the shape of a greyhound with long legges: and the said Elizabeth then said that the next impe should be a black impe, and should come for the said Master *Sterne*, which appeared, but presently vanished: and the last that appeared was in the shape of a polcat, but the head somewhat bigger. And the said Elizabeth then told this informant that she had five impes of her owne, and two of the impes of the old Beldam *Weste* (meaning one *Anne Weste*, widow) who is now also suspected to be guilty of witchcraft: and said sometimes the impes of the old beldam sucked on the said Elizabeth; and sometimes her impes sucked on the old beldam *Weste*. And the said Elizabeth further told this informant that Satan would never let her rest, or be quiet, until she did consent to the killing of the hogges of one Mr. *Edwards* of *Mannintree* aforesaid, and the horse of one *Robert Tayler* of the same towne: and this informant further saith, that going from the house of the said Mr. *Edwards* to his own house about nine or ten of the clock that night, with his greyhound with him, he saw the greyhound suddenly give a jumpe, and ran as shee had been in full course after an hare; and that when this informant made haste to see what his greyhound so eagerly pursued, he espied a white thing about the bignesse of a kitlyn, and the greyhound standing aloofe from it; and that by and by the said white impe or kitlyn daunced about the said greyhound, and by all likelihood bit off a piece of the flesh of the shoulder of the greyhound; for the greyhound came shrieking and crying to this informant with a piece of flesh torn from her shoulder. And this informant further saith, that coming into his own yard that night he espied a black thing, proportioned like a cat, onely it was thrice as big, sitting on a strawberry-bed, and

fixing the eyes on this informant; and when he went towards it, it leaped over the pale towards this informant, as he thought, but ran quite through the yard, with his greyhound after it to a great gate, which was undersett with a paire of tumbrell strings, and did throw the said gate wide open, and then vanished; and the said greyhound returned againe to this informant, shaking and trembling exceedingly."

Mr. Matthew Hopkins having delivered himself of this dainty farrago, "Mr. John Sterne, Gent.," on the same day confirms him, of course; spicing his own account, however, a little more highly with "Impes." "And the said Elizabeth desired this informant, and the rest that were in the roome with her to sit downe, and said she would show this informant and the rest some of her impes: and within half an hour there appeared a white thing in the likeness of a cat, but not altogether so big: and being asked if she would not be afraid of her impes, the said Elizabeth answered; 'What, doe yee thinke I am afraid of my children?' And that she called the name of that white impe *Hoult*," &c. &c.

Then follow five other informations, also upon oath, to the same tune, and the confession of the poor overworn old woman herself, giddy for lack of sleep—and upon this evidence she was executed at Chelmsford.

Hopkins, having made his footing good, witch prosecutions, of course, abounded in the county. The conviction of Elizabeth Clarke was made the stepping-stone for that of Anne Leech, who who was also executed at Chelmsford, as was Hellen Clark. His depositions do not indeed appear in the two last-mentioned cases, which were heard before the justices in April, of the same year; but he was, doubtless, busy on the spot, aiding and abetting; indeed, we find him in that same month giving his information upon oath in the case of Rebecca West, against whom a true bill was found by the grand jury; though she escaped capital punishment on her trial, being "acquitted of life and death." Anne Weste was not so fortunate, for she was executed at Manningtree, on the first of August in that year.

Our readers, if we have any, must be sick at heart of these melancholy and disgusting details; but before we close the painful catalogue, we must draw their attention to one more case; for it strongly shows how completely the mania for witch-finding had pervaded all ranks, reaching even that holy profession, the duty of whose members it is to preach peace on earth, and good-will towards men. We have, indeed, the information of "John Edes, Clerke," in the cases of Rebecca and Anne West, or Weste; but in those cases there was much more evidence,

such as it was. In the following case, the Rev. Joseph Long appears to be the principal and almost the only witness.

"The Information of Joseph Long, Minister of Clacton, in the county of Essex, taken before the said just., April 29, 1645."

"This informant saith, that Anne, the wife of John Cooper, of Clacton aforesaid, being accused for a witch, confessed unto this informant, that she the said Anne was guilty of the sin of witchcraft; and that she hath had three black impes * * * * called by the names of *Wynowe*, *Jeso*, and *Panu*. And this informant saith, that the said Anne told him, that once she cursed a colt of one William Cottingams, of Clacton aforesaid, and the said colt broke his neck presently after going out of a gate; and the said Anne further confessed unto this informant, that she the said Anne offered to give unto her daughter, Sarah Cooper, an impe in the likeness of a gray kite, to suck on the said Sarah; which impe's name, the said Anne called *Tomboy;* and told the said Sarah, there was a cat for her; and this informant saith, that the said Anne confessed unto him, that she the said Anne, about ten yeers since, falling out with Johan, the wife of Gregory Rous, of Clacton aforesaid, the said Anne Cooper sent one of her impes to kill the daughter of the said Gregory and Johan, named Mary. And this informant saith, that to his own knowledge, about the same time, the said child was strangely taken sick, and languishing, within a short time died."

The deposition of this clergyman seems to have been nearly all sufficient of itself, for the only other information given in this case is that of Roger Hempson, taken before the said justices on the same day; this compendious piece of evidence runs thus:

"This informant doth confirm the information of the said Joseph Longe, and concurs in every particular."

The unhappy woman against whom this miserable stuff was recorded, was also executed at Manningtree, on the 1st of August, in the same year.

In 1661 we find the Demon Drummer of Tedworth, among other varied pranks, in the house of Master John Mompesson, purring, one night, in the children's bed like a cat, "and at that time the clothes and children were lift up from the bed, and six men could not keep them down."

The lingering but expiring belief in this wretched sort of witchcraft is admirably touched by Addison* in his account of Moll White and her Cat, which, according to Sir Roger de Coverley, "lay under as bad report as Moll White herself; for besides that Moll was said often to accompany her in the same

* In the year 1711.

shape, the cat was reported to have spoken twice or thrice in her life, and to have played several pranks above the capacity of an ordinary cat." The worthy knight's chaplain is made to act a very different part from the odious character assumed by the minister of Clacton, for Mr. Spectator tells us that he had found upon inquiry, that Sir Roger was several times staggered with the reports that had been brought him concerning this old woman, and would frequently have bound her over to the sessions, had not his chaplain with much ado persuaded him to the contrary.

We willingly quit this dark part of our subject, and return to honest every-day household cats; observing only, at parting, that if any modern Canidia should wish to concoct a charm, the brain of a black cat, the blacker the better, is a special ingredient.

The animal mechanism of this lion of the mice is admirably adapted to the work that the creature has to do. The apparatus by which the claws are retracted and sheathed within the folds of the integuments, so that they may be unworn by ordinary progression, and always ready for use, is a most beautiful consentaneous arrangement of bone, elastic ligament and tendon. When the claws of a cat are thus retracted, nothing is softer than

"The velvet of her paws;"

Nothing can be more noiseless than the silent tread with which she steals along on these *pattes de velours*; but the concealed weapons are ready to start on the instant into sharp and lacerating action—quick as the lancets of a cupping instrument in the hands of the most skilful operator. How she crouches, as if she would almost conceal herself in the ground when she settles herself for her spring—with what slashing force does she throw herself on her nimble four-footed prey—with what agility does she leap into the air, and strike down her feathered game! Her moveable spine enables her to turn in an almost inconceivably small compass; and with the aid of the powerful muscles of the posterior extremities and her clutching claws, she is up a tree in an instant. Her powerful canine teeth—her scissor-like back teeth, for they can hardly be called molars, and her rough tongue, with its horny retroverted papillæ, are all fashioned to assist in the destruction and dissection of her prey; that is, when she has satiated herself with the enjoyment of its agonies of terror, and fruitless, though desperate efforts to escape.*

Some have found it difficult to account for the cause of the

* Those who wish to make themselves minutely acquainted with the organization of the common cat should consult the elaborate and accurate work of Straus-Durckheim, entitled: "Anatomie Descriptive et Comparative du Chat," 4to. 1845.

cat's proficiency in the art of ingeniously tormenting: a scene of this sort is a horrible sight to any one of good feeling; but it is not at all clear that the cat, though she evidently takes great delight in the sport, perpetrates the act as a mere gratification of wanton cruelty. On the contrary, it seems that she resorts to this agonizing amusement as an exercise to sharpen her powers, or to keep, as it were, her hand in. A kitten, three parts grown, is very much given to this pastime. The mouse, in its paroxysms of terror, leaps aloft: the cat secures the victim with a bound. She then remains quite quiet, giving the panting trembler time to recover, and, presently, the poor mouse attempts to steal off gently. She suffers him to go on—he quickens his pace—he is near the door—you feel almost certain that he is safe: bounce she pitches on the wretch, and has him secure. In this way the mouse is made to exhaust all his powers of strength and ingenuity in his anxious endeavours to escape; whilst the cat, like a cunning fencer, is exercising herself to foresee and counteract every attempt. Sometimes a cat with kittens will slightly cripple two or three young rats which she keeps under surveillance, occasionally turning out one for the sport and practice of herself and family. But a cat knows better than to pursue this system with a bird which she has knocked down with a *coup de patte*: no; she kills the winged prey at once.

Familiar as this animal is to every eye, it seems to be the opprobrium of painters. With one or two brilliant exceptions, of which Edwin Landseer is the chief, artists generally fail in representing a house cat. So, when it is brought upon the stage, how seldom does the actor understand his part? When a cat is in the bills, we are not often absent, and most catawampous failures has it been our lot to see. But in this branch of art, also, a genius occasionally appears.

Upon one occasion a Tartar enchanter had been for some time on the stage, magnificently clad, and with the lower part of his person dazzlingly enveloped in something like a Brobdignag card-purse: not only did he not get a hand, but his insufferable dulness began to endanger the piece. Coughs became extremely prevalent, and an awful sibilation from the pit

"Rose like an exhalation;"

when to him entered a cat about the size of a leopard, but admirably dressed, walked up to a tree, and raising himself on his hind-legs against it, began clawing, as cats do, to keep their talons in trim. This immediately brought down the house; one of the greatest philosophers of the day who was present exclaiming: "That's an observer!" and leading the rounds of applause like

the trunk-maker of old. We know how difficult it is to get human artists to enter into the conception of this extremely difficult part; but when the actor succeeds, the success is perfect. Could any one or any thing excel *Jenny Vertpré* in the "Femme Chatte?"

A docile doggie, sewed up in cats' skins has sometimes been substituted; but do what you may, he *will* be a doggie still. It was a four-footed actor of this description that performed the cat in that pretty pantomime—pantomimes were pantomimes then—"Harlequin Whittington." When the rats ran about "to eat all up" to the great consternation of King Longobarobonyo, and the infinite delight of the holyday children, both small and great, down the captain of the ship put Whittington's cat. The cat did his duty, and was always cruelly severe upon one particular scamperer, evidently not formed of pasteboard, and made to feel "he was no actor there:" so far so good, excepting that the principal performer was rather of the least for a pantomimic cat; and moreover pursued his prey more in the canine than the feline style. Still he got applause, and all went well, save with the poor real rat, who appeared for that night only. But when the victorious cat was brought forward to the floats in the arms of the captain, surrounded by the admiring king and queen, and their whole court, panting from the recent deed, and with a real red elongation of tongue hanging out of his mouth, all the terrier was confessed.

In these days, when the schoolmaster is not only abroad, but knocketh at the nursery door, to disenchant the nurslings, and reduce their tales to the simplicity of unromantic matter of fact, we dare not conceal the appalling fact that doubts have been cast upon the authenticity of the almost sacred story of "Whittington and his Cat."

"Cat?" say the learned. "Bah! *Cat* it might have been, but it was no mouser. Do we not know that *catta* signified a vessel? Does not the profound Bailey, in his edition of Facciolatus and Forcellinus acknowledge this, when under that word *catta* he says, '*Videtur genus esse navigii, quod et Angli nos dicimus,* A CAT?' Did not Philip once build a great ship—and how was it named? "*Tandem*" says the erudite Aldrovandus, "CATUS *erat navis genus; legimus enim in annalibus Flandriæ a Philippo Burgundione grandem navim Cati nomine ædificatam fuisse, quæ valli instar esse videbatur; nec præter rationem cum Catæ naves apud Gellium etiam legantur.*" We hope here be truths. Whittington's *cat*, then, was merely the lucky freight of one of these vessels, which well husbanded, and fortunately and skilfully increased, raised the venturer to the lofty eminence on which is placed the chair whence the Lord Mayor of London looks down

upon all sublunary things made to be eaten and imbibed. And we allow you this out of our great mercy; for, if you show any signs of discontent, it shall go hard but we shall damage the theory that London has any exclusive right to the story at all. Have no other countries in Europe such a tale? Is there no such story current in Asia somewhat generally, and in Persia very particularly? When you have answered these questions, and mayhap a few more, we will condescend further."

Still, as it would be as difficult for the learned of the present day, say what they will, to convince a thorough-bred cockney that Whittington's cat was not a *bond fide* mouser, as it was for the learned of a former day to convince Uncle Toby that there was no consanguinity betwixt the Duchess of Suffolk and her son, we would advise them not to waste their lore upon ears unalterably charmed by the music of Bow bells chiming so merrily

"Turn again Whittington."

In the preface to the famous ballad of "Sir Richard Whittington's advancement" we find it stated* as certain that there was such a man, a citizen of London, by trade a mercer, one who left public edifices and charitable works behind him sufficient to transmit his name to posterity. He founded a house of prayer, with an allowance for a master, fellows, choristers, clerks, &c., and an almshouse for thirteen poor men, called Whittington College. He rebuilt the wretched and loathsome prison standing in his time at the west gate of the city, and called it Newgate. The better half of St. Bartholomew's Hospital was built by him, and the fine library in Grey-friars, afterwards called Christ's Hospital, as well as great part of the east end of Guildhall, with a chapel and a library, in which the records of the city might be kept.

The same authority adds that he was chosen sheriff in the seventeenth year of the reign of King Richard II., William Stondon, grocer, being then mayor of London. He was knighted, and in the twenty-first year of the same reign was chosen mayor—an office which he held thrice, his second mayoralty being in the eighth year of Henry IV.'s reign, and his third in the seventh year of Henry V., to whom he is said to have advanced a very considerable sum towards carrying on the war in France. His generous conduct to the conqueror of Agincourt is thus noticed in the ballad:

"More his fame to advance,
Thousands he lent the king,
To maintain war in France,
Glory from thence to bring.

* A.D 1727.

"And after, at a feast
Which he the king did make,
He burnt the bonds all in jest,
And would no money take.

"Ten thousand pounds he gave
To his prince willingly;
And would no money have
For his kind courtesy."

We shall now let the writer of the preface speak for himself:

"He marry'd Alice, the daughter of Hugh and Molde Fitzwarren: at whose house, traditions say, Whittington liv'd a servant, when he got his immense riches, by venturing his cat in one of his master's ships. However, if we may give credit to his own will, he was a knight's son; and more obliged to an English king and prince than to any African monarch, for his riches. For when he founded Whittington College, and left a maintenance for so many people, as above related; they were, as Stow records it (for this maintenance), bound to pray for the good estate of Richard Whittington and Alice his wife, their founders; and for Sir William Whittington and Dame Joan his wife; and for Hugh Fitzwarren and Dame Molde his wife; the fathers and mothers of the said Richard Whittington and Alice his wife: for King Richard II. and Thomas of Woodstock, Duke of Glocester, special Lords and promoters of the said Richard Whittington, etc."

Howel in his *Londinopolis*,* speaks of Richard Whittington as having been chosen for the mayoralty *four* times. The ballad and the preface above quoted give him that office only thrice.

"For to the city's praise,
Sir Richard Whittington,
Came to be in his days,
Thrice Mayor of London."

Generous, charitable, and exemplary as was his life, it does not appear that his bones were left undisturbed; for the same Howel says that he was "thrice buried."

In the chapter "Of Vintry Ward" the last-mentioned author thus writes:—"Then is the fair parish church of Saint Michael, called Paternoster church, in the Royal-street. This church was new builded, and made a colledge of S. Spirit and S. Mary, founded by Richard Whittington, mercer, four times mayor, for a master, four fellows, masters of arts, clerks, conducts, chorists, etc.; and an alms-house, called God's House or Hospital, for

* A.D. 1657.

thirteen poor men, one of them to be tutor, and to have sixteen pence the week, the other twelve, each of them to have fourteen pence the week for ever, with other necessary provision, an hutch with three locks, with a common seal, etc. The licence for this foundation was granted by King Henry IV. the eleventh of his reign, and in the twelfth of the same king's reign, the mayor and the communalty of London, granted to Richard Whittington a vacant piece of ground thereon, to build his colledge in the Royall; all which was confirmed by Henry VI. the third of his reign, to John Coventry, Jenkin Carpenter, and William Grove, executors to Richard Whittington. This foundation was again confirmed by Parliament, the tenth of Henry VI., and was suppressed by the statute of Edward VI. The alms-houses with the poor men do remain, and are paid by the mercers."

"This Richard Whittington was (in the church) three times buried: first, by his executors, under a fair monument; then in the reign of Edward VI. the parson of that church, thinking some great riches (as he said) to be buried with him, caused his monument to be broken, his body to be spoiled of his leaden sheet, and again the second time to be buried; and in the reign of Queen Mary, the parishioners were forced to take him up, and lap him in lead, as afore, to bury him the third time, and to place his monument, or the like, over him again, which remaineth still, and so he rested."

At all events, as long as London is London, Whittington will be always associated with his cat; and no bad associate either, notwithstanding the vile character given of the slandered quadruped by Buffon and others for caprice, treachery, and in short, every bad quality that would make a companion odious.

Now, though we grant as a general proposition that cats are attached more to the place than the person, we at the same time are free to confess our belief that they are capable of the most steady personal attachment. There are

"Some that are mad, if they behold a cat,"

and the antipathy is so strong that they are ready to faint if one be in the room with them. The gallant Highland chieftain alluded to by Sir Walter Scott, had "been seen to change into all the colours of his own plaid" on such an occasion. Such persons cannot be friendly to cats. But though these animals are too often treated with contumely and cruelty, the instinct of attachment is so strong, that they will still keep about the place, notwithstanding the bad treatment they have endured. Though proverbially loth to wet their feet, they have been known, after being carried to a far country in bags, in the hope of banishing

them, to swim rivers in their irresistible anxiety to return to their home."*

Others again will tell you, "I was disposed to be kind to that cat; but whilst I was caressing it the ill-natured beast turned on me, and bit and scratched me." No pleasant operation, certainly, under any circumstances, but becoming a fearful attack when it is recollected that the bite of a cat has been known to communicate the horrible hydrophobia, as fatally as that of the dog. Now in such cases, unless the animal be diseased, or, at least, in nine out of ten, it will be found either that puss's temper has been ruined by previous provocations, or that the party attacked does not know how to play with a cat—he does not understand the animal; what he calls play is teasing, and is resented. But when a cat has been kindly dealt with, and its master or mistress is really fond of it, few animals are more attached. Such cats have been seen to follow their patrons about, like dogs, escort them to the door, when permitted to go no farther, and abide patiently on the mat listening for the much-desired return from morning till evening. On the entrance of their friend, no dog could express a more lively affection, a more hearty welcome. We need only allude to the story of the favourite cat that would *not* be parted from its dying master—was with difficulty driven from the chamber of death—and even after the body was

"Compounded with the dust, whereto 'twas kin,"

would return again and again to the grave, though repeatedly chased from the churchyard, and there lie, braving cold and hunger for hours.

To be sure, puss is, as Pennant says, "a piteous, squalling, jarring lover;" nor need we wonder that the distinguished northern functionary

"Unmov'd, unmelted by the piteous *muse*"

of a cat-parliament held under his window, fired his blunderbuss upon the amazed wretches—not, however, till he had quieted his legal conscience by reading the Riot Act.

The days of puss's gestation are fifty-six, or thereabout; and as she produces two or three litters in a year, and some five or six

* Female cats are naturally kindly animals; and so strongly imbued with the love of offspring, that, at the season of maternity, all feelings seem to be merged in that passion. They have been known to suckle leverets and mice, and young rats have been seen sharing the full tide of maternal affection with a kitten. In the latter case the cat showed the young rats the same attentions in caressing them, and dressing their fur as she did to her kitten.

at a birth, there is no fear that the cat population will decrease, notwithstanding the unsparing means used to keep it down. The young do not see till about the ninth day.

The varieties are almost infinite: among them, the long silken-haired Angora, the Persian, the bluish Chartreuse, the tortoise-shell, and the typical tabby, are the most prominent. There is also a tailless variety, which most probably owes its existence to its unfortunate ancestors having been deprived of that handsome appendage by accident. To Spain, it is said, we are indebted for the tortoiseshell variety; and a male of this colour, or rather assemblage of colours, being rare, even now, fetches a high price.* We have seen one of these unhappy varieties chained to his little kennel, at the door of a dealer in beasts and birds, looking as important, and withal as sorrowful, as any wild beast of them all could look in such a shackled situation. And here we are almost tempted to give a hint to the President and Council of the Zoological Society of London, on the subject of the sin of keeping cats in cages. They certainly were once guilty of such incarceration; but we hope that they have repented and let their prisoners out. At all events, the bereavement† which they have recently had to lament disarms all censure; and for the incarcerated cats, if incarcerated they still be, we can breathe no

* A friend, not less noted for his scientific labours than his fund of anecdote, tells us that some twenty-five, or (by'r Lady) thirty years ago, a tortoiseshell Tom-cat was exhibited in Piccadilly, where the Liverpool Museum was afterwards shown, and where dowagers and spinsters thronged to his levee, as was recorded in the caricatures of the day. "One hundred guineas," says our philosophical friend of many tales, "was the price asked; and I saw many a longing, lingering, coronetted coach at the door of the exhibition-room."

† After a gestation of fourteen months and twenty days, the first giraffe ever born in Europe, came into the world at one o'clock, on Wednesday, the 19th of June, 1839, at the gardens of the Zoological Society of London, in the Regent's-park. It was a male, strong and hearty, and stood on its outstretched legs two hours after its birth.

It was a most beautiful creature, and almost a perfect miniature of the full grown animal, standing about six feet high, the principal difference being in the smallness of the white divisions that separated the great spots. The horns, too, were relatively smaller; and the frontal protuberance was not developed. Not in the least shy, it came up to be caressed; and its full, large, lucid eye, with its long silken lashes, was lovely.

The mother was not unkind to her offspring, but she would not let it come near her to receive nourishment. Persisting in this prohibition, she lost the power of affording it: still the vigorous young animal throve admirably to all appearance, upon cow's milk, and there was every reason to hope that it would be brought up well by hand.

On Friday morning, the 27th, at six o'clock, it was frisking about the large box, or rather spacious apartment, in which it was confined with its

better wish than a speedy deliverance from their gaol, even if it be to embark with the grim ferryman on their transportation to the Feline Elysium.

"There shall the worthies of the whisker'd race,
Elysian mice o'er floors of sapphire chace,
'Midst beds of aromatic marum stray,
Or raptur'd rove beside the milky way."

mother; and at half-past ten was dead. On the *post mortem* examination, the first three stomachs were found in a healthy state; but the fourth was slightly inflamed, and the rest of the alimentary canal presented a similar condition. The inference to be drawn from this seems to be that its food disagreed with it. Not the slightest blame can attach to any one from this untoward event. The conduct of the keepers, both before and after the birth was exemplary; and we have only to hope that if Zaïda should present the society with another baby giraffe, that she will be able and willing properly to fulfil the duties of a mother.'

Since the last paragraph was written Zaïda has produced no less than three young ones, all healthy males. She nursed them admirably, and they are alive and well; two in England, and one, by the gift of The Zoological Society of London, in Ireland.

APES AND MONKEYS.

"A wilderness of Monkeys."

MERCHANT OF VENICE.

MAZURIER, it is said, after a long and patient attendance upon the monkeys domiciled in the *Jardin du Roi*, sewed up in skins, and with a face painted and made up in a concatenation accordingly, raised at last the benevolence of a tender-hearted one to such a pitch, that it offered him a bit of the apple it was eating, and drew from him that rapturous exclamation, pregnant with the consciousness of his apparent identity with the monkey-character —"Enfin! enfin, je suis singe!"

Poor Mazurier! when he died, *Polichinelle* was shipwrecked indeed. We can see him now gaily advancing, as if Prometheus had just touched the wood with his torch, in a brilliant cocked hat of gilt and silvered pasteboard, with rosettes to match, gallantly put on athwart ships; that very pasteboard, so dear to recollection as having glittered before our delighted eyes when old nurse unfolded the familiar little books of lang-syne—books which in these philosophical days are shorn of their beams; for "Cock-Robin," "Little Red Riding Hood," "Jack and his Bean-stalk, "The Children in the Wood," "The Seven Champions," "Valentine and Orson," with the other dearly-beloved legends of our childhood, when permitted to enter the nursery, are more soberly clad: their splendid and many coloured attractive coats have almost entirely disappeared.

Mazurier was the personification of that invincible Prince of Roués, Punch; but if the comic strength of this elastic, this Indian-rubber man lay in Polichinelle, it was in "The Ape of Brazil" that his tragic power lay—and that power, absurd as the expression may seem to those who never beheld him, was great. There was but one blot in his inimitable performance. It was perfect as a piece of acting—if that may be called acting which, like Morris Barnett's Monsieur Jacques, is nature itself; but, alas! Mazurier had dressed the character without a tail. The

melodrama was admirably got up; but there, to the great distress of zoologists, was the tailless quadrumane in the midst of Brazilian scenery, where no traveller—and travellers are proverbial for seeing strange things—has ever ventured to say that he saw a monkey without that dignifying appendage. How true is it that wisdom—such wisdom as it is—brings sorrow; all the rest of the world were in ecstacies; the zoologists shook their heads, and the scene ceased to affect them.

Be it remembered henceforth by the getters-up of monkey melodramas, that all the monkeys of the New World yet discovered rejoice in tails; the anthropöid apes of the Old World have none.

But, tailed or tailless, this amusing order of mammiferous animals has always been, and ever will be, regarded by the million with feelings of mingled interest and disgust. Every one is irresistibly attracted by the appearance and tricks of a monkey —very few leave the scene without something like mortified pride at the caricature held up to them. The zoologist regards the family with an interest proportioned to their approximation to man; but he knows that their apparent similarity to the human form vanishes before anatomical investigation; and that, although there may be some points of resemblance, the distance between the bimanous and the quadrumanous types, notwithstanding all the ingenious arguments of those philosophers who support the theory of a gradual development from a monad to man, is great.

We would treat with respect such names as Lamarck, Bory de Saint Vincent—ay, and others, even unto Monboddo, though the announcement of the last will hardly be received by any naturalist with gravity; but we must beg leave to differ from them *toto cælo*. Leaving the tail out of the question, there is no doubt that the number and quality of the teeth in some species are identical with the formula belonging to the human subject; and there may be as little that the peasants of the Landes of Aquitaine, who gain their living by climbing for the resin of the *Pinus Maritima*, have acquired a power of opposing, in a certain degree, the great toe to the others; but these facts are, after all, but traps for the unwary, as those who wish to be informed on the subject will see by turning to Professor Owen's paper on the Osteology of the Chimpanzee and Orang Utan.*

A modern zoologist† has, not inaptly, applied the term *Cheiropeds* or hand-footed animals to this group; and, indeed, strictly

* Transactions of the Zoological Society of London, vol. i. p. 343.

† Mr. Ogilby.

speaking, they can hardly be called quadrumanous or four-handed. Their extremities, admirably fitted for grasping and climbing, as far as their arboreal habits require those actions, fall short—how very far short!—of that wonderful instrument which surrounds a being born one of the most helpless of all creatures, with necessaries, comforts, and luxuries, and enables him to embody his imaginings in works almost divine. We look in vain among the most perfectly-formed of the anthropöid apes for the well-developed opposable thumb of the human hand—that great boon, the ready agent of man's will, by means of which he holds "dominion over the fish of the sea, and over the fowl of the air, and over every living thing that moveth upon the earth."

The hands of the monkeys are at best but "half made up," and they are generally more or less well fashioned in proportion to the greater or less prehensile development of the tail. The habits of the race, as we have already hinted, are arboreal, and their favourite haunts are the recesses of those tropical forests where they can either sport in the sunbeams on the topmost boughs, or shelter themselves from its scorching rays under the impervious canopy of a luxuriant vegetation. When their privacy is invaded by man, a restless and constantly recurring curiosity seems to be their prevailing feeling at first, and at last, the intruders are frequently pelted with stones, sticks, and fruits heavy and hard, more especially if they make any demonstration of hostility.

Robert Lade thus speaks of their behaviour when he went to hunt some of them near the Cape:—

"I can neither describe all the arts practised by these animals, nor the nimbleness and impudence with which they returned after being pursued by us. Sometimes they allowed us to approach so near them, that I was almost certain of seizing them; but when I made the attempt, they sprung, at a single leap, ten paces from me, and mounted trees with equal agility, from which they looked with great indifference, and seemed to derive pleasure from our astonishment. Some of them were so large, that if our interpreter had not assured us that they were neither ferocious nor dangerous, our number would not have appeared to be sufficient to protect us from their attacks. As it would serve no purpose to kill them, we did not use our guns" (we respect the good feeling of honest Robert and his companions); "but the captain happened to aim at a very large one which sat on the top of a tree, after having fatigued us a long time in pursuing him. This kind of menace, however, of which the animal perhaps recollected his having sometimes seen the consequences, terrified him to such a degree, that he fell down motionless at our feet, and we had no

difficulty in seizing him. But whenever he recovered from his stupor it required all our dexterity and efforts to keep him. We tied his paws together; but he bit so furiously that we were under the necessity of covering his head with our handkerchiefs."

Indeed, those who have only seen these agile creatures in menageries or in a reclaimed state can have no idea of the wild activity of the tribe in their native woods. Swinging and leaping from tree to tree, ever on the hunt for fruits and birds' nests—they are most unconscionable plunderers of eggs—they lead a merry life, which is, however, often cut short by those mighty snakes that frequently lie in ambush near their careless, unsuspecting prey. These serpents, are the greatest enemies of the monkeys, with the exception of the common persecutor—man. He, indeed, is sometimes touched by compunctious visitings, when it is too late.

"Seeing me," says a South American traveller, speaking of a monkey, "nearly on the bank of the river in a canoe, the creature made a halt from skipping after his companions, and, being perched on a branch that hung over the water, examined me with attention and the strongest marks of curiosity, no doubt taking me for a giant of his own species, while he chattered prodigiously, and kept dancing and shaking the bough on which he rested with incredible strength and agility. At this time I laid my piece to my shoulder, and brought him down from the tree into the stream; but may I never again be witness to such a scene! The miserable animal was not dead, but mortally wounded. I seized him by the tail, and taking him in both my hands to end his torments, swung him round and hit his head against the side of the canoe; but the poor creature still continuing alive, and looking at me in the most affecting manner that can be conceived, I knew no other means of ending his murder than to hold him under the water till he was drowned, while my heart sickened on his account, for his dying little eyes still continued to follow me with seeming reproach, till their light gradually forsook them, and the wretched animal expired. I felt so much on this occasion that I could neither taste of him nor his companions when they were dressed, though I saw that they afforded to some others a delicious repast."

The repentant writer and his party were driven to the commission of the act for want of fresh provisions; and many of the family are considered most excellent eating—by those who can get over the appearance of the animal and of its bones when cooked. There are not many, however, who can sit down to a

dish of monkeys without feeling that it is rather a cannibalish proceeding.

It will be obvious, when the leafy home of this restless race is considered, that it is of the utmost consequence that the infant-monkey should be protected as much as possible from a fall. Accordingly, the prevailing instinct of a young one is, in sailor's language, to hold on. It clings to its mother with the greatest tenacity; and, to enable it to do this, considerable strength is thrown into the extremities, the anterior limbs especially.

Le Vaillant, in his introduction to his first voyage, gives the following curious instance of the exhibition of this instinct under extraordinary circumstances. When living in Dutch Guiana at Paramaribo, where he was born, and where he had already, though very young, formed a collection of insects, the future traveller and his party in one of their excursions had killed a female monkey:

"As she carried on her back a young one, which had not been wounded, we took them both along with us; and when we returned to the plantation, my ape had not quitted the shoulders of its mother. It clung so closely to them, that I was obliged to have the assistance of a negro to disengage them; but scarcely was it separated from her, when, like a bird, it darted upon a wooden block that stood near, covered with my father's peruke, which it embraced with its four paws, nor could it be compelled to quit its position. Deceived by its instinct, it still imagined itself to be on the back of its mother, and under her protection. As it seemed perfectly at ease on the peruke, I resolved to suffer it to remain, and to feed it there with goat's milk. It continued in its error for three weeks, but after that period, emancipating itself from its own authority, it quitted the fostering peruke, and by its amusing tricks became the friend and favourite of the whole family."

Though it is difficult to suppress a smile at the idea of a monkey clinging to a full-bottom on a wig-block and fancying it its mamma, the story, as it begins mournfully with the slaughter of the poor mother, ends tragically for her unhappy offspring: it died a terrible death,—the result, indeed, of its own mischievous voracity, but in agonies frightful to think of:—

"I had, however," continues Le Vaillant, "without suspecting it, introduced the wolf among my flocks. One morning, on entering my chamber, the door of which I had been so imprudent as to leave open, I beheld my unworthy pupil making a hearty breakfast on my noble collection. In the first transports of my passion I resolved to strangle it in my arms; but rage and fury

soon gave place to pity, when I perceived that its voraciousness had exposed it to the most cruel punishment. In eating the beetles it had swallowed some of the pins on which they were fixed, and though it made a thousand efforts to throw them up, all its exertions were in vain. The torture which it suffered made me forget the devastation it had occasioned; I thought only of affording it relief: but neither my tears, nor all the art of my father's slaves, whom I called from all quarters with loud cries, were able to preserve its life."

To return to the instinct exemplified in the first part of this melancholy tale; we remember to have seen a female monkey and her young one in the cage of a menagerie—and a small cage, too. In this case the instinct,—and it was a good example of the wide difference between that quality and reason,—both on the part of the mother and her offspring, was just as strong as it could have been in their native forests. The young one clung as tightly, and the mother showed as much anxiety lest it should be dashed to pieces by a fall whilst she was sitting at the bottom of her cage, which rested on the ground, as if she had been swinging with the breeze upon the tree top.

The form of the skull in some species approaches to that of man, and the theory of the facial angle adopted by Cuvier and M. Geoffroy St. Hilaire, a theory founded on the application of Camper's rule for ascertaining the degree of intelligence and beautiful expression of the human face divine, would at first lead us to conclude that the family which is the subject of our inquiry stood high in the intellectual scale. But, if the facial angle in the young anthropöid apes is equal to 65°, in age that angle frequently sinks below 30°; and, indeed, we shall find that the docility and apparent intelligence which are so strongly marked in the Chimpanzee and Orang, and which have given rise to such exaggerated ideas of their intellect, have been always observed in youthful animals; while untameable ferocity and brutality,—in short, the very reverse of the amiable and interesting qualities which have been so much dwelt on,—have been uniformly the concomitants of age. The old anthropöid apes have "foreheads villanous low."

Accordingly, though there may be exceptions to the general rule—and that there are we shall show—the stories told of our friends, whether by ancients or moderns, are hardly ever in their favour. There may be a certain degree of cunning, and even of accomplishment, in the monkey of whom the tale is told; but, in nine cases out of ten, the laugh is either at his expense, or he is only saved from ridicule by some horrible catastrophe. From the earliest ages down to the time of that wanchancy creature

Major Weir, Sir Robert Redgauntlet's great ill-favoured jackanape, the whole tribe have been regarded as unlucky meddling beings: the Major came to an untimely end as every one knows, and where he went, or, at least, was expected, after the breath was out of his body, is pretty plain.

Either, like Ælian's ape, the mimic, in its zeal for imitation, makes the trifling mistake of plunging a child into boiling water instead of cold, or it is taken by the hunter's stratagem of washing his face in its presence, and then leaving, by way of a lotion for the poor animal that has been watching his motions, some of the best bird-lime, with which it belutes its eyes till they are sealed up: or a parcel of shell-snails are placed round it, in the midst of which it sits like a fool, not daring to stir for fear.

The same Ælian, indeed, and others, tell us of the ape that was a most skilful charioteer; of the adroitness of another in escaping from cats, when hunted by them on trees in Egypt, by running to the extremity of a bough too slender to bear the cats, and so, taking advantage of its bending, reaching the ground in safety, leaving the cats *planté là*, clutching and clinging on as they best might to save themselves from the shock of the recoil; of that renowned and all-accomplished animal, to come to more modern times, the *Prægrandem simiam*, which Paræus saw in *ædibus Ducis Somei*, and which so excelled in many arts, that it was named *Magister Factotum*, but not till after the poor beast's hands had been cut off to keep it out of mischief,—to say nothing of the celebrated *coup*, dear to diplomatists, of the *cat's paw*. Some of our readers, by the way, may not know that this scene which Edwin Landseer has so admirably represented—painted, we would have said, but painting it may not be called, for the coals are live coals, and the yelling cat is held by the imperturbable monkey to a fire that makes one hot to look at it—that this event, so familiar to every schoolboy, is recorded as having actually taken place in the hall of Pope Julius the Second.

But what are these to the clouds of unfortunate adventurers? An ape may generally be considered to be well off if he only loses an eye, like the cheiroped king's son in the Arabian story, by magical fire.

It is but fair to add a legend evidently intended to convey an impression of the sapience of our friends; not that we are going to enter into the controversy as to whether the Prince of Darkness chose the similitude of an ape as the most appropriate for the temptation of our common mother Eve; we leave that to the initiated: our tale is much more humble in its pretensions.

In "A New History of Ethiopia, being a full and accurate description of the kingdom of Abessinia, vulgarly, though erro-

neously, called the Empire of Prester John, by the learned Job Ludolphus, author of the Ethiopic Lexicon Made English by I. P. Gent," (folio, 1682,) there is a grand engraving of apes with this superscription :—

"1. Scrambling about the mountains.

"2. Removeing great huge stones to come at the wormes.

"3. Sitting upon ant-hills and devouring the little creatures.

"4. Throwing sand or dust in the eyes of wild beast that come to sett upon them."

The whole being illustrative of the following edifying piece of information :—

"Of apes there are infinite flocks up and down in the mountains themselves, a thousand and more together: there they leave no stone unturned. If they meet with one that two or three cannot lift, they call for more, and all for the sake of the wormes that lye under; a sort of dyet which they relish exceedingly. They are very greedy after emmets. So that having found an emmet-hill, they presently surround it, and laying their fore-paws with the hollow downward upon the ant-heap, as fast as the emmets creep into their trecherous palmes they lick 'em off with great comfort to their stomachs: and there they will lye till there is not an emmet left. They are also pernicious to fruit and apples, and will destroy whole fields and gardens, unless they be carefully looked after. For they are very cunning, and will never venture in till the return of their spies, which they send always before; who giving information that all things are safe, in they rush with their whole body, and make a quick dispatch. Therefore they go very quiet and silent to their prey; and if their young ones chance to make a noise they chastise them with their fists, but if they find the coast clear, then every one hath a different noise to express his joy. Nor could there be any way to hinder them from further multiplying, but that they fall sometimes into the ruder hands of the wild beasts, which they have no way to avoid, but by a timely flight or creeping into the clefts of the rocks. If they find no safety in flight, they make a virtue of necessity, stand their ground, and filling their paws full of dust or sand, fling it full in the eyes of their assailant, and then to their heels again."

A collection of stories, printed by John Rastell considerably more than a century before the date of the work last quoted, and not long ago discovered by the lamented Rev. I. I. Conybeare, next attracts our notice. It is no other than "The Hundred Merry Tales," the opprobrium of Benedick, or as it is imprinted "A. C. Mery Talys." This curious and important addition to the stock of Shaksperiana had, as it is stated in the advertisement

of the private reprint (Chiswick, 1815,) been converted into the pasteboard which formed the covers of an old book. As far as the pleasantry is concerned generally, we do not wonder at Benedick's wincing under Beatrice's imputation that he got his wit out of it.

But though there is much matter of fact in the book, there are also many queer tales, some of which have passed for new,—"Old Simon," for instance, One of them, the forty-sixth tale, is instructive, inasmuch as it shows what chief-justices were in those days.

The story is headed "Of the Welcheman that delyuered the letter to the ape."

The first lines are wanting, but there is enough to make it appear that a master sends his Welsh retainer with a letter to the Chief Justice in order to obtain favour for a criminal who had been in the writer's service, with directions to the said Welshman to return with an answer. The tale then proceeds thus:

"This Welcheman came to the Chefe Justyce place, and at the gate saw an ape syttynge there in a cote made for hym, as they use to apparell apes for disporte. This Welcheman dyd of his cappe and made curtsye to the ape, and sayd—'My mayster recommendeth him to my lorde youre father, and sendeth him here a letter.' This ape toke this letter and opened it, and lokyd thereon, and after lokyd vpon the man, makynge many mockes and moyes as the propertyes of apes is to do. This Welcheman, because he understood him nat, came agayne to his mayster accordynge to his commandes, and told hym he delyuered the letter unto my lorde chefe iustice sonne, who was at the gate in a furred cote. Anone his mayster asked him what answere he broughte? The man sayd he gaue hym an answere, but it was other Frenche or Laten, for he understode him nat. 'But, syr,' quod he, 'ye nede nat to fere, for I saw in his countenance so moche that I warrante you he wyll do your errande to my lorde his father.' This gentylman in truste thereof made not anye further suite. For lacke whereof his seruaunt that had done the felonye within a monthe after was rayned at the kynge's benche, and caste, and afterwarde hanged."

And what does the reader think the moral is? Some reflection, perhaps, upon the impunity of those attached to the great, with a hint at God's judgment against unjust judges? No such thing:—"By this ye may see that every wyse man ought to take hede that he sende nat a folyssche seruante vpon a hasty message that is a matter of nede." Not a bad specimen of the morality of the good old times.

Those who would amuse themselves with more monkeyana of

ancient date, will find some choice passages in Erasmus, Porta, and others; and may learn how a monkey may occasionally supersede the use of a comb—what a horror monkeys have of tortoises and of snails—how violent is the antipathy between the cock and the ape,—and how both of these were added to the serpent and introduced into the deadly sack wherein the matricide was inclosed to suffer the frightful punishment awarded to his unnatural act. But we beg to offer the following trifle, showing how a monkey can behave at a dinner-table.

In a country town, no matter where, there lived the worthiest and most philosophical of old bachelors, with a warm heart and a sound head, from whose well-powdered exterior dangled that most respectable ornament a *queue*. Long did this august appendage, now so rarely seen, linger among the benches of the inns of court. Two worthies we have yet in our eye,—*Ultimi Caudatorum!* with what veneration do we look up to ye! with what fear and trembling did we regard the progress of the influenza!—the destroying angel has passed by, and the tails still depend from your "frosty pows"—blessings on'em!

Pardon the digression; and return we to our bachelor, who entertained a monkey of such good breeding and so much discretion, that Jacko was permitted to make one at the dinner-table, where he was seated in a high child's chair next to his master, and took off his glass of perry and water in the same time and measure with his patron, and in as good a style as Dominie Sampson himself could have performed the feat. Now, his master's housekeeper made the best preserved apricots in the county, and when the said apricots were enshrined in a tart, the golden fruit set off by the superincumbent trellis, a more tempting piece of *pâtisserie* could hardly be laid before man or monkey. One of these tarts enriched the board at a small dinner-party, and was placed nearly opposite to Jacko, who occupied his usual station. The host helped one and another to some of this exquisite tart, but he forgot poor Jacko, who had been devouring it with his eyes, and was too well-bred to make any indecorous snatch at the attraction, as most monkeys would have done. At last Jacko could stand it no longer, so looking to the right and left, and finally fixing his eyes on the guests opposite, he quietly lifted up his hand behind his master's back, and gave his tail such a tug as made the powder fly, withdrew his hand in an instant, and sat with a vacant expression of the greatest innocence. People don't like to have their tails pulled. His master gave him a look, and Jacko gave him another, but even the eloquent expression of Hogarth's monkey on the offending bear's back fell short of it. It said as plainly as look could speak—"Don't be angry—

don't thrash me—they did not see it—I beg your pardon, but I *must* have a bit of that apricot tart:"—he was forgiven and helped.

Authors generally seem to think that the monkey race are not capable of retaining lasting impressions; but their memory is remarkably tenacious when striking events call it into action.

One that in his zeal for imitation had swallowed the entire contents of a pill-box—the cathartics, fortunately, were not Morisonian—suffered so much, that ever afterwards the production of such a box sent him to his hiding-place in a twinkling.

Another that was permitted to run free had frequently seen the men-servants in the great country kitchen, with its huge fireplace, take down a powder-horn that stood on the chimney-piece, and throw a few grains into the fire, to make Jemima and the rest of the maids jump and scream, which they always did on such occasions very prettily. Pug watched his opportunity, and when all was still, and he had the kitchen entirely to himself, he clambered up, got possession of the well-filled powder-horn, perched himself very gingerly on one of the horizontal wheels placed for the support of saucepans, right over the waning ashes of an almost extinct wood-fire, screwed off the top of the horn, and reversed it over the grate.

The explosion sent him half-way up the chimney. Before he was blown up he was a smug, trim, well-conditioned monkey as you would wish to see on a summer's day: he came down a carbonadoed nigger in miniature, in an avalanche of burning soot. The *à plomb* with which he pitched upon the hot ashes in the midst of the general flare-up, aroused him to a sense of his condition. He was missing for days. Hunger at last drove him forth, and he sneaked into the house close-singed, begrimed, and looking scared and devilish. He recovered with care, but, like some other great personages, he never got over his sudden elevation and fall, but became a sadder if not a wiser monkey. If ever Pug forgot himself and was troublesome, you had only to take down a powder-horn in his presence, and he was off to his hole like a shot, screaming and clattering his jaws like a pair of castanets.

Le Vaillant, in his African travels, was accompanied by an ape, which lived on very good terms with the cock and hens, showing, in defiance of the legend, no antipathy to the former, and a strong penchant for the latter, for whose cacklings he listened, and whose eggs he stole. But this and other peccadillos were amply atoned for, by the *bonhommie* and other good qualities of *Kees*, for that was the name of the traveller's ape, which seems to have almost realized the virtues of Philip Quarl's monkey.

"An animal," says Le Vaillant in his first voyage, just after

speaking of the benefits that he derived from his gallant chanticleer, "that rendered me more essential services; which, by its useful presence, suspended and even dissipated certain bitter and disagreeable reflexions that occurred to my mind, which by its simple and striking instinct, seemed to anticipate my efforts, and which comforted me in my languor—was an ape, of that kind so common at the Cape, under the name of *Bawians*. As it was extremely familiar, and attached itself to me in a particular manner, I made it my taster. When we found any fruit or roots unknown to my Hottentots, we never touched them until my dear Kees had first tasted them; if it refused them, we judged them to be either disagreeable or dangerous, and threw them away.

"An ape has one peculiarity which distinguishes it from all other animals, and brings it very near to man. It has received from nature an equal share of greediness and curiosity: though destitute of appetite, it tastes without necessity every kind of food that is offered to it; and always lays its paw upon everything that it finds within its reach.

"There was another quality in Kees which I valued still more. He was my best guardian; and whether by night or by day, he instantly awoke on the least sign of danger. By his cries, and other expressions of fear, we were always informed of the approach of an enemy before my dogs could discover it: they were so accustomed to his voice, that they slept in perfect security, and never went the rounds; on which account I was extremely angry, fearing that I should no longer find that indispensable assistance which I had a right to expect, if any disorder or fatal accident should deprive me of my faithful guardian. However, when he had once given the alarm, they all stopped to watch the signal; and on the least motion of his eyes or shaking of his head, I have seen them all rush forward, and scamper away in the quarter to which they observed his looks directed.

"I often carried him along with me in my hunting excursions, during which he would amuse himself in climbing up trees, in order to search for gum, of which he was remarkably fond. Sometimes he discovered honey in the crevices of rocks, or in hollow trees; but when he found nothing, when fatigue and exercise had whetted his appetite, and when he began to be seriously oppressed by hunger, a scene took place which to me appeared extremely comic. When he could not find gum and honey he searched for roots, and ate them with much relish; especially one of a particular species, which, unfortunately for me, I found excellent and very refreshing, and which I greatly wished to partake of. But Kees was very cunning: when he found any of this root, if I was not near him to claim my part,

he made great haste to devour it, having his eyes all the time directed towards me. By the distance I had to go before I could approach him, he judged of the time that he had to eat it alone; and I, indeed, arrived too late. Sometimes, however, when he was deceived in his calculation, and when I came upon him sooner than he expected, he instantly endeavoured to conceal the morsels from me: but by means of a blow well applied, I compelled him to restore the theft; and in my turn becoming master of the envied prey, he was obliged to receive laws from the stronger party. Kees entertained no hatred or rancour; and I easily made him comprehend how detestable that base selfishness was of which he had set me an example."

This is all very fine, but we confess that we think poor Kees hardly used in this matter; nor are we aware of any law, written or unwritten, human or Simian, by which the conversion of the root, which he had sagaciously found, to his own use could be made a theft, or by which the prize could be ravished from him, except indeed by the "good old law" that "sufficeth" people in such cases—

> "the simple plan,
> That they should take who have the power,
> And they should keep who can."

But to return to Le Vaillant's entertaining narrative.

"To tear up these roots, Kees pursued a very ingenious method, which afforded me much amusement. He laid hold of the tuft of leaves with his teeth; and pressing his four-paws firmly against the earth, and drawing his head backwards, the root generally followed: when this method, which required considerable force, did not succeed, he seized the tuft as before, as close to the earth as he could; then throwing his heels over his head, the root always yielded to the jerk which he gave it. In our marches, when he found himself tired, he got upon the back of one of my dogs, which had the complaisance to carry him for whole hours together: one only, which was larger and stronger than the rest, ought to have served him for this purpose; but the cunning animal well knew how to avoid this drudgery. The moment he perceived Kees on his shoulders, he remained motionless, and suffered the caravan to pass on, without ever stirring from the spot. The timorous Kees still persisted; but as soon as he began to lose sight of us, he was obliged to dismount, and both he and the dog ran with all their might to overtake us. For fear of being surprised, the dog dexterously suffered him to get before him, and watched him with great attention. In short, he had acquired an ascendancy over my whole pack, for which he

was perhaps indebted to the superiority of his instinct; for among animals as among men, address often gets the better of strength. While at his meals, Kees could not endure guests; if any of the dogs approached too near him at that time, he gave them a hearty blow, which these poltroons never returned, but scampered away as fast as they could.

"It appeared to me extremely singular, and I could not account for it, that, next to the serpent, the animal which he most dreaded was one of his own species: whether it was that he was sensible that his being tamed had deprived him of great part of his faculties, and that fear had got possession of his senses, or that he was jealous and dreaded a rivalry in my friendship. It would have been very easy for me to catch wild ones and tame them; but I never thought of it. I had given Kees a place in my heart, which no other after him could occupy; and I sufficiently testified how far he might depend on my constancy. Sometimes he heard others of the same species making a noise in the mountains; and, notwithstanding his terror, he thought proper, I know not for what reason, to reply to them. When they heard his voice they approached: but as soon as he perceived any of them he fled with horrible cries; and, running between our legs, implored the protection of everybody, while his limbs quivered through fear. We found it no easy matter to calm him; but he gradually resumed, after some time, his natural tranquillity. He was very much addicted to thieving, a fault common to almost all domestic animals; but in Kees it became a talent, the ingenious efforts of which I admired. Notwithstanding all the correction bestowed upon him by my people, who took the matter seriously, he was never amended. He knew perfectly well how to untie the ropes of a basket, to take provisions from it; and, above all, milk, of which he was remarkably fond: more than once he has made me go without any. I often beat him pretty severely myself; but, when he escaped from me, he did not appear at my tent till towards night."

"Milk in baskets!" why, truly, the term "basket" as applied to a vessel for holding milk appears to require some explanation; but it was really carried in baskets woven by the Gonaquas, of reeds, so delicate and so close in texture that they might be employed in carrying water or any liquid. The abstraction of the milk, &c. we consider as a kind of set-off against the appropriation of Kees's favourite root by his master.

The pertinacious way in which Kees bestrode Le Vaillant's dogs will recal to the remembrance of some a monkey that was, and perhaps still is, riding about London, in hat and feather, with garments to match, upon a great dog, with the usual accom-

paniments of hand-organ and Pan's pipe. Upon these occasions the monkey evidently felt proud of his commanding position; but ever and anon we have seen him suffer from one of those sad reverses of fortune to which the greatest among us are subject. In the midst of the performance, while the organ and pipe are playing, and the monkey has it all his own way, and, elevated with the grandeur that surrounds him, is looking rather aristocratically at the admiring crowd, some good-natured but unlucky boy throws the dog a bit of cake, in his zeal to pick up which the latter lowers his head and shoulders so suddenly as infallibly to pitch his rider over his head. We have thought more than once that there was a sly look about the dog as he regarded the unseated monkey, utterly confounded by his downfal and the accompanying shouts of laughter from the bystanders.

We shall now proceed to give sketches of the most remarkable species of monkeys in the New World, as well as of those in the Old Continent and its Islands; merely observing, *en passant*, that though zoologists declare that there is but one European species,* another, at least, is to be met with in our quarter of the globe. The *Demopithecus* of Aristophanes, "qui vel fraudatione vel adulatione erga populum simiam se exhibet," is, assuredly, not yet extinct; on the contrary, it still is, and seems at all times to have been, common in Ireland; nor is it by any means of rare occurrence in Great Britain, especially about the period of a general election.

* Macacus sylvanus, Lacépède—the Barbary Ape which has established itself on the rock of Gibraltar.

AMERICAN MONKEYS.

"High on the twig I've seen you cling,
Play, twist, and turn in airy ring."

THE TWO MONKEYS.

MANY of the forests of South America flourish in all their primitive grandeur. Immense tracts are covered with vegetable forms in every stage of luxuriant development. Towering trees, their trunks embraced by gigantic twiners and garlanded by a profusion of plants,* in whose curious and splendid blossoms Nature seems to have imitated in the wantonness of her prodigality almost every variety of insect shape, shoot up and darken the light of day with their broad shadows.

In these "boundless contiguities of shade," which have never echoed to the woodman's axe, the most perfect silence reigns during the day; a silence, unbroken save by the crashing fall of some ancient tree prostrated by the weight of years, and carrying with it in one vast ruin all that it had long fed and fostered.

But, if all is silent during the day, at night

"The wonted roar is up amidst the woods,
And fills the air with barbarous dissonance;"

for in the depths of these solitudes live the Howling Monkeys, to whose voice the voice of the Rev. Gabriel Kettledrummle would be but as the sough of the wind in the bracken.

* The Orchidaceous Epiphytes. So great is their number in humid situations that a thousand species may, it is asserted, be found in Tarma, Huanuco, and Xauxa alone. They abound in the recesses of tropical forests; but, in the Orchidaceæ, imitation is not confined to images of the insect world, as those will acknowledge who have seen the flower of the Peristeria, enshrining the semblance of a milk-white dove, which seems actually to hover above an altar; wax could hardly be modelled into a more perfect representation.

We have already stated that the South American monkeys are all blessed with tails, but they are deprived of those brilliant-blue and red callosities which give so much splendour to the integuments of many of the Old World family, and recal sometimes a part of the costume of a certain unearthly pedestrian; for *his* femoral habiliments

> "were blue,
> And there was a hole where the tail came through."

Neither do they rejoice in cheek-pouches: they are, consequently, unable to keep anything in the corner of their jaws, or to furnish forth any rebuke to the Rosencrantzes and Guildensterns of the several courts in this best of all possible worlds.

"The Howlers," as they are termed, claim our first attention. They are the largest of the American *Simiadæ*,* and the fierce brutality of their disposition, joined to their low facial angle, remind the observer of the baboons of the old continent, whilst their gregarious habits and nocturnal howlings agree with the manners of the Gibbons. The yells uttered by these Howlers in the dead of the night are described as absolutely appalling. They strike upon the ear of the uninitiated benighted traveller as if they were not of this world; and even to the naturalist they are terrible. "Nothing," says Waterton, speaking of the *Mono Colorado*, or Red Howler, "nothing can sound more dreadful than its nocturnal howlings. While lying in your hammock in these gloomy and immeasurable wilds, you hear him howling at intervals from eleven o'clock at night till day-break. You would suppose that half the wild beasts of the forest were collecting for the work of carnage. Now it is the tremendous roar of the jaguar as he springs on his prey; now it changes to his deep-toned growlings as he is pressed on all sides by superior force; and now you hear his last-dying moan beneath a mortal wound."

When Humboldt and Bonpland landed at Cumana they saw the first troops of Araguatos,† as they journeyed to the mountains of Cocallor and the celebrated cavern of Guacharo. The forests that surrounded the convent of Caripe, which is highly elevated and where the centigrade thermometer fell to 70° during the night, abounded with them, and their mournful howling was heard, particularly in open weather or before rain or storms, at the distance of half a league. Upwards of forty of this gregarious species were counted upon one tree on the banks of the Apure;

* Genus Mycetes.

† Mycetes Ursinus. It is nearly three feet in length, without including the tail.

and Humboldt declares his conviction that, in a square league of these wildernesses, more than two thousand may be found. Melancholy is the expression of the creature's eye, listless is its gait, and dismal is its voice. The young ones never play in captivity like the Sagoins; no, "The Araguato de los Cumanenses," as the worthy Lopez de Gomara voucheth, "hath the face of a man, the beard of a goat, and a staid behaviour," such, in short, as may well beseem the possessor of such a "powerful organ," as the newspaper critics have it.

We will endeavour, with Humboldt's assistance, to convey to the reader some idea of the structure of this sonorous instrument. That most observing traveller states that the bony case of the *os hyoïdes*, or bone of the tongue, in the Mona Colorado is, in size, equal to four cubic inches (water measurement). The *larynx*, or windpipe, consisting of six pouches, ten lines in length and from three to five in depth, is slightly attached by muscular fibres. The pouches are like those of the little whistling monkeys, squirrels, and some birds. Above these pouches are two others, the lips or borders of which are of a yellowish cast; these are the pyramidal sacs which are formed by membranous partitions and enter into the bony case. Into these sacs, which are from three to four inches in length and terminate in a point, the air is driven; the fifth pouch is in the aperture of the arytenoïd cartilage and is situated between the pyramidal sacs, of the same form but shorter; and the sixth pouch is formed by the bony drum itself: within this drum the voice acquires the doleful tone above alluded to. But we are becoming anatomical and soporifical; no more, then, of this "evening drum," and turn we to that grotesque race, the Sapajous.

They are slender, mild in disposition, flat in face, long in tail, and *spidery* in general appearance. The genus *Ateles* of M. Geoffroy St. Hilaire stands first upon the roll. With anterior hands, either entirely deprived of thumbs, or only supplied with mere rudiments, and weak, long limbs, justifying their popular names of "Spider Monkeys," they are compensated by a prehensile tail of such exquisite sensibility and power, that it may be almost considered a fifth hand. For a length of six or seven inches from the tip, this is naked; and, on the under surface, it is comparatively callous for the purpose of prehension. Humboldt asserts that the animal can introduce it, without turning its head, into narrow chinks or clefts, and hook out any substance; but he never saw it employed to convey food to the mouth, though the natives will have it that the monkey goes a fishing with it. Leap the species of this genus cannot, or, at most, but very imperfectly; this tail of all work, however, amply makes amends, for by it they

hang suspended from the branches or swing themselves from bough to bough, and from tree to tree, with the utmost agility. Dampier relates, and his statements are generaliy worthy of credit, that, when troops of them have occasion to cross rivers, they look out for a point where the trees are most lofty, and project farthest over the water. Having arrived at such a place, they climb to the boughs best suited to their purpose, and form a long chain by grasping the tails of each other. This chain hangs free at the lower end, while it is held on at the top, and the living pendulum is swung backwards and forwards, till it acquires sufficient vibration to carry the lower end to the opposite bank. Then the lowest joint catches hold of the first branch within his reach, and mounts as high as he can. As soon as he has made himself fast, the upper joint on the other side lets go, and the whole conjoined "tail" swings, and is carried safely over. Humboldt and Bonpland saw some of them which inhabit the banks of the Orinoco suspended in great numbers from the trees, and hanging on to each other by tail and hands in the most ridiculous groups.

The *Quata*, or, as the French write the word, *Coaita*,* is said to unite activity with intelligence, gentleness, prudence, and penetration. To be sure the Quatas will, when they meet with a learned traveller, or any other strange animal, descend to the lower branches of their trees, to examine the phenomenon, and, when they have satisfied their curiosity, pelt the phenomenon aforesaid, to get rid of him or it: but that they be sensible and trustworthy is proved by Acosta, who has immortalised the Quata belonging to the Governor of Carthagena. This domestic was regularly sent to the tavern for wine. They who sent him put an empty pot into one hand, and the money into the other; whereupon he went spidering along to the tavern, where they could by no means get his money from him till they had filled his pot with wine. As this Ganymede of the Governor came back with his charge, certain idle children would occasionally meet him in the street, and cast stones at him; whereupon he would set down his pot and cast stones at *them*, "till he had assured his way, then would he return to carry home his pot. And what is more, although he was a good bibber of wine, yet would he never touch it till leave was given him." We are sorry to add that this amiable genus is considered very good eating. Humboldt frequently saw the broiled limbs of the Marimonda in the huts of the natives on the Orinoco; and, at Emeralda, he found in an Indian hut a collation of their roasted and dried bodies, prepared as the *pièces de résistance* for a "harvest home."

* Ateles paniscus

In *Lagothrix*, the head is rounder than it is in *Ateles*, the hands are provided with thumbs, such as they are, but the tail is still long and prehensile, and the under surface at the tip is naked. The species of this genus are of some size. The Caparro which inhabits the banks of the Guaviaré, one of the streams that flow into the Orinoco, is two feet two inches in length, without including the tail. The head is very large and round in proportion.

Cebus next claims our attention. In this form we find the tail beginning to lose somewhat of its prehensile powers, and no longer bared at the tip to add to its sensibility as an organ of touch. In lieu of this, the strength is thrown into the limbs, which are well developed, and the anterior hands are remarkably well formed—though, still, less perfectly than those of the Old World monkeys. The first of the five fingers is become more thumb-like, and the palms of the extremities both before and behind are endowed with much sensitiveness. These sylvans are excellent climbers, and of a surprising agility.

Of these *Cebi*, the Horned Sapajou,* with the hair of its forehead standing up so as to give the animal the appearance of having a London waterman's cap on, is one of the largest, while the *Ouavapavi des cataractes*,† which is very mild and intelligent, is of small size. We remember once to have heard of a sort of compact which was said to have been entered into between a monkey and a pig, the latter of which carried the monkey a certain number of times round an orchard, in consideration of the monkey's climbing the apple-trees, and giving them a shake for the benefit of the porker. Though not very old at the time, we gave the narrator credit for being blessed with a very lively imagination, albeit the story was told gravely and vouched as a fact. But Humboldt actually saw, at Maypures, one of these domesticated Ouavapavis, obtaining his rides apparently without any such understanding; for this clever monkey used to bide his time, and every morning caught a luckless pig, which he compelled to perform the part of his horse. Seated on pigback did he majestically ride about, the whole day, clinging to his bristly steed as firmly as ever the Old Man of the Sea clung to Sinbad, not even giving poor piggy a respite at meal-times, but continually bestriding him all the time he was feeding in the savanna that surrounded the Indian huts. A missionary had another of these riders; but the missionary's monkey had laid the strong hand of possession on a comfortable cat which had been brought up with him, carried him well, and bore all his felestrian exploits with patience and good humour.

* Cebus fatuellus. † Cebus Albifrons.

The tail which has become less and less prehensile in the genera last noticed, becomes in *Callithrix* no longer capable of use as a support. The pretty playful little Siamiri,* whose length hardly exceeds ten inches exclusive of the tail, which reaches thirteen or fourteen, winds that appendage like a boa round its body and limbs, reminding the zoologist in some degree of the mode in which the white-fronted Lemur† disposes of his; and we now begin to observe, moreover, traces of insectivorous and carnivorous appetite. The Macavacahow,‡ at the sight of a bird, is roused at once from its apparent apathy; darting on its victim like a cat, it secures the prize and swallows it in an instant, with all the actions that mark the beast of prey.

In the Dourocouli,§ the Cara rayada of the missionaries, we observe traces of the cat in appearance, voice, and manners. This curious animal is nine inches in length; and its tail, which is hairy, but not prehensile, is about fourteen; the head is large and round; the muzzle short; the eyes very large; but there is no apparent external ear. Three dark stripes are drawn on the head, and come down in front, the centre stripe on the forehead and the two lateral ones reaching to the rounded corners of the eyebrows.

The animal is, during the day, "a huge sleeper," whence its name "Mono Dormillon." Humboldt, notwithstanding the warning of the natives, that the Dourocoulis will tear out the eyes of slumbering men, kept one in his bed-room. It slept regularly from nine in the morning till seven at night; and sometimes it went to sleep at daybreak. It hated the light, and, when disturbed, the lethargic animal could scarcely raise its heavy white eyelids; and its large eyes, which, at nightfall, were lighted up like those of the owl, were lustreless. It must have been but a restless companion for the night: *then* it was all exertion and activity, made wild noises, and was constantly jumping up against the walls. It lived for five months, but all attempts to tame it were fruitless.

The Dourocoulis are captured during the day by the natives when they are fast asleep in some hollow tree. The male and female are often taken in the same hole, for they live in pairs. In a state of nature they pursue small birds and insects, not neglecting vegetables, almost every kind of which they will eat. Humboldt's specimen was very fond of flies, which it caught dexterously, and would even sometimes rouse itself for this chase on a gloomy day. Its night cry resembled that of the Jaguar, and it is thence called *Titi-tigre*. The mewing notes which it occasion-

* Callithrix sciureus.
† Lemur Albifrons.
‡ Simia lugens.
§ Aotes trivirgatus.

ally sends forth remind the hearer of a cat, and this resemblance is heightened when the head of a Dourocouli in a state of irritation swells, and the animal hisses or spits, throws itself into the position of a cat when attacked by a dog, and strikes quick and cat-like with its paw. Its voice is very powerful for its size. In the Leoncito,* whose body does not exceed seven or eight inches in length, we have much of the appearance of a tiny lion.

But it is in the genus *Pithecia* that we have the nearest approach to human likeness. There are some strong resemblances in the Couxio†; but, as Humboldt well observes, of all the monkeys of America, the Capuchin‡ of the Orinoco bears the greatest similitude in its features to man. There are the eyes with their mingled expression of melancholy and fierceness; there is the long thick beard; and, as this last conceals the chin, the facial angle appears much less than it really is. Strong, active, fierce, the Capuchin is tamed with the greatest difficulty, and, when angered, he raises himself on his hinder extremities, grinds his teeth in his wrath, and leaps around his antagonist with threatening gestures. If any malicious person wishes to see this Homunculus in a most devouring rage, let him wet the Capuchin's beard, and he will find that such an act is the unforgiveable sin. There is one point, indeed, wherein our monkey differs from civilized man—he very seldom drinks; but, when he does, the similarity returns. Unlike the other American monkeys, which bring their lips to the liquid, the Capuchin lifts the water in the hollow of his hand, inclines his head upon his shoulder, and, carrying the draught to his mouth in the cup of Diogenes, drains it with great deliberation. This appears to be his mode of drinking in a state of nature; and Humboldt thinks that it is adopted to prevent the wetting of the beard which renders the animal furious, and which could not be avoided if the lips were applied in the usual Simian mode. Our friend the Capuchin is about two feet nine, bushy tail and all, of a brownish red colour, the hair of the body being long, and that on the forehead having a direction forwards. The beard, which arises below the ears, is brown, inclining to black, and covers the upper part of the breast. His large sunken eyes are overarched with well marked brows, and his nails are bent, with the exception of those on his thumbs. He is not gregarious, and is seldom found in company with his female.

We must not omit to notice another of these *Pitheciæ* with black face and hands and a shorter tail, having a good deal of the general aspect in miniature of one of those respectable, ancient, withered negroes, who, after a long life of slavery, find themselves,

* Midas leonina. † Pithecia Satanas. ‡ Pithecia Chiropotes.

in their old age, transmuted by legislative magic into apprentices. This species, which is termed the Cacajao,* is hardly more than a foot long. It is voracious, weak, very lazy, mild, easily frightened, and lives in troops in the forests.

In *Callithrix* and *Aotes*, the carnivorous propensity and character are, as we have seen, joined to the general habits of the monkey; and we proceed to finish this imperfect sketch of the American *Simiadæ*, by calling the reader's attention to forms distinguished by a union of that character and propensity with squirrel-like manners. Such are the genera *Hapales* and *Midas*. To the latter belong the pretty diminutive Marikina or Silky Monkey† and the Leoncito before alluded to. These, though their way of life is but little ascertained, are supposed hardly ever to quit the trees.

Of the debonnaire Ouistiti or Sanglain‡ much more is known. This small delicate creature, with its rich pale grey coat, and pale greyish white ear tufts, like the *ailes de pigeon* of the old beau of other days, feeds in its native woods not only on fruits, roots, and seeds, but also indulges occasionally in insects and little birds. In captivity the Sanglains are great pets, and Edwards relates a curious instance of the craving for something that possessed life breaking out in one that was the favourite of a lady. Once, when he was let loose, he snatched a gold fish from its "watery glass," and instantly killed and devoured it. The lady, upon this, made him a present of some live eels, and, as the little fellow was not more than eight inches long without his tail, these lively gifts frightened him at first a good deal by twisting round his neck when he seized them. His carnivorous nature, however, prevailed, and, without a well sanded hand, he soon mastered and ate them.

M. F. Cuvier had an opportunity of observing their domestic arrangements in a conjugal state. He had a pair who were blest with three young ones; but it seems to have been the Lady Sanglain's first accouchement, and she had no experienced female friend to direct her: so after regarding her interesting progeny, she proceeded to bite off the head of one of them; the other two in the mean time took to the breast, and the moment the mother felt them she was all affection. The papa was even more affectionate than the mamma, and assiduously assisted in the nursery. The favourite position of the young ones was upon the back or bosom of the mother; and, when she was tired of nursing, she would come up to her mate with a shrill cry, which said as plainly

* Pithecia melanocephala. † Midas rosalia.
‡ Hapales Iacchus, Illiger. Iacchus vulgaris, Geoffroy.

as cry could speak, "Here! do take the children." He, like a good natured father, immediately stretched forth his hands and placed his offspring upon his back or under his body, where they held on while he carried them about, till they became restless for want of that which he could not give them; and then he handed them back to his partner, who, after satisfying their hunger, again turned them over to their papa.

Cuvier seems to think that their intelligence is inferior to that of many of the smaller monkeys. That their attachment to each other is sometimes great, the following anecdote, related by a lady who kept a couple of them, and who could never tell the story unmoved, will prove.

These playful Sanglains had not, indeed, any family, but they were very happy and were all in all to each other. One of them, unfortunately, died. The other seemed to be unwilling to believe the change that had taken place, and continued to caress the body until it became absolutely necessary to remove it. Everything was done to console the survivor that its fond and distressed mistress could think of; but, as soon as its mate was taken away, the poor widowed Sanglain pressed its little hands to its eyes, refused to be comforted, and remained pining in that attitude till death relieved it from its sufferings.

APES AND MONKEYS OF THE OLD CONTINENT.

"Almost a man in size and look."
GAY'S FABLES.

VOLTAIRE'S *Vieux Solitaire*, speaking of those lofty systematists, "*qui ont créé l'univers avec leur plume*"—they are not altogether extinct in our day—notices two zoological theories.

One of these taught that the mountains and man were produced by the waters of the sea. At first, it seems, there were charming marine men, who afterwards became amphibious, and then their fascinating forked tail (how the conservative belles of those days must have deplored the change) became transformed into the lower extremities, on which the great biped has walked ever since. The age of King Saleh, and of his daughter Queen Gulnare, evidently formed an epoch in this transition.

The second "Treatise" demonstrated that the race of men were bastard slips of a tribe of baboons.

The controversy seems to have waxed as warm as that between the Big-endians and the Little-endians; but the worthy *Solitaire* appears to have been daring enough to entertain doubts of the correctness of both genealogies, and does not show any very marked preference for either of these systems:—"*J'aimai*," says his manuscript, "*autant descendre d'un poisson que d'un singe.*"

And yet there have not been wanting philosophers, as we have seen, to advocate the cause of the latter pedigree, which is involved in the theory of gradual development. Notwithstanding, however, the different phases which Tiedemann and others have clearly shown to take place in the formation of the human brain before birth, ascending, as they do, from the structure of that organ in the lower animals to that of fishes, reptiles, birds, and mammiferous quadrupeds, till, during the last period of gestation it receives the finish which distinguishes the encephalon of man; and notwithstanding the occasional difficulties presented by that respectable, persevering, and omnipresent sub-family, the Bores,

most of whom afford grounds to the credulous for suspecting that they have not succeeded in entirely rubbing off their excrescences—we eschew the fallacy. At the same time, feeling bound to pay all proper respect to those who are interested in maintaining the doctrine of Monboddo and others, both French and British, we beg leave to commence our sketch with those old world monkeys whose tails still flourish in all their pendulosity and perfection.

The *Guenons* form a very large group. Robed in bright and beautiful furs, and often light and graceful in their proportions, they still vary greatly in size and shape. Many of them are gifted with a most bounding agility, which carries them from bough to bough, in their African and Asiatic forest-homes, with nearly the velocity of a bird. When, unhappily for them, they are captured, they prove amiable in disposition, very playful, but not malignant nor mischievous; and, with due submission to the late all accomplished Mr. Astley, tailed though they be, they are distinguished for the facility with which they learn tricks, and the address with which they perform them.

The *Entellus Monkey*,* widely spread as it is over the continent of India and its islands, is but little known to those who frequent our menageries: for, in the first place, the species is held in great respect by the natives; and, in the next, the captives generally pine and die soon after their arrival in Europe. There was one in our Zoological Garden in the Regent's Park, and another at Paris; but neither of them long survived their arrival; and Thunberg's specimen died from cold in the delicious climate of the Cape of Good Hope. The accounts given by the last-mentioned author and Wolff are very amusing; but they appear to have been embellished by a very vivid fancy. There seems, however, to be no doubt that these worshipful monkeys have acuteness enough to take advantage of the veneration in which they are held, and to make the unfortunate husbandman pay a ruinous tribute to their sanctity. When the fruits of the well-tilled earth are ripe and ready to be gathered in, down from the forests come overwhelming bands, confident in their sacred character, and make spoil of the harvest before the eyes of the cultivator. There he stands, on the spot now rich with the produce of his labours, vainly endeavouring to scare away with loud cries these swarms of relentless foragers, who quickly consume everything. He sees his luscious figs, his refreshing cocoa-nuts, his choice apples, and mellow pears, disappear at this *fête champêtre*; nor do even his

* Semnopithecus Entellus.

cabbages and potatoes escape the appetite of his self-invited and unwelcome guests.

Dr. Horsfield, who notices the domestication of another species of monkey by the Javanese, and its association with the horse, remarks, that in every stable, from that of a prince to that of a mantry or chief of a village, one is to be found; but he never saw the *Budeng*,* the poor *Negro Monkey*, thus comfortably situated. On the contrary, this unfortunate species, which possesses a jet black fur, with long silvery hairs, much prized, both by natives and Europeans, for their riding equipages and military decorations, is cruelly attacked with cudgels and stones wherever it is found, and slaughtered in great numbers. Associated in large troops on the trees of the extensive forests of Java—as many as fifty are often found together—the proscribed Budengs, at the sight of their deadly enemy, man, lift up their voices in loud screams and wailings. A violent bustle and commotion ensues, and branches of decaying trees, detached by their movements, are not unfrequently precipitated on the heads of those spectators who have, imprudently, not been satisfied with observing them at a distance.

The genera *Cercopithecus* and *Cercocebus* form the section of the true *Guenons*. Of the former genus, which is short in the muzzle, and has a facial angle extending fifty degrees, a round head, slightly flattened in front, and a flat nose, the Diana Monkey† and the Mona afford perhaps the most pleasing examples. It is, indeed, rather hard upon the Queen of the silver bow, that she should be degraded to the likeness of an African tailed Quadrumane; but we suppose that the white crescent on the monkey's brow was irresistible to M. Geoffroy. "Mona" is a term applied to all long-tailed monkeys, with certain modifications, by the Moors of North Africa, and is, most probably, of Arabian origin; but the individuals of the pretty species which M. Geoffroy names *Cercopithecus Mona*, appear to differ much in disposition, though the general character of the species is considered to be gentle and playful. M. F. Cuvier's Mona was the most amiable of monkeys, and its sweetness of temper, which grew with its growth, and was developed under his own eye, remained unimpaired by age. It was, to be sure, a most expert and noiseless thief; and, being suffered to roam at will, would open a chest or drawer by turning the key in the lock, untie knots, undo the rings of a chain, and pick pockets with admirable dexterity. This last accomplishment was its favourite pastime;

* Semnopithecus Maurus. † Cercopithecus Diana.

and a stranger seldom departed without having undergone a search, with a delicacy of touch not to be detected, and always successful. It was very affectionate; and the gentle satisfaction with which it would receive and return caresses, and its low but expressive cry of pleasure on such occasions, made it very endearing; nor was this feeling towards it checked by any of the disgusting habits too often exhibited by its congeners. One which was kept in the menagerie of the Zoological Society was, on the contrary, as ill-conditioned a brute as the worst of the Simian, or of any other family.

Cercocebus approaches in its manners very near to *Cercopithecus;* but the greater development of the long canine teeth, the facial angle, the large cheek-pouches, and the shortening tail, seem to lead towards the Baboons. The Mangabey, or White-eyelid Monkey,* and the Green Monkey† belong to this genus. Western Africa is supposed to be the locality of the former; and the latter is known to be an inhabitant of the Cape de Verd Islands, as well as of the African continent. The Mangabey, with its upper eyelids of a dead white, was so named by Buffon, from the erroneous supposition that his specimens were brought from that territory in Madagascar. In a state of captivity it is a most unwearied droll—frolicsome and good-natured withal. Sir William Jardine mentions a female in Mr. Wombwell's menagerie that was most lively, and gives a figure of her, no easy task, for she was never at rest for one moment; and her activity was increased when she perceived that she was noticed. "She performed," says Sir William, "many of the attitudes of the most experienced harlequins * * *. She was remarkably cleanly, and careful not to soil her person. When feeding, she seldom put her head to the food or dish, but lifted and conveyed it to her mouth." Her diet consisted of bread and milk principally, and vegetables occasionally: like Potemkin, she was very fond of a carrot. The large troops in which the Green Monkeys assemble have been remarked by many travellers. It was one of these societies, most probably, that afforded M. Adanson the excellent sport, on the enjoyment of which he dwells with so much satisfaction. The poor animals were surprised in the midst of their tricks; and M. Adanson declares that nothing could be more entertaining than the endeavours of the little wretches to escape from the slaughtering gun which the traveller seems to have worked most unrelentingly. Though he killed twenty-three in less than one hour, within a space of twenty toises, and wounded, we dare say, many more, not one of the sufferers screamed during

* Cercocebus fuliginosus. † Cercocebus sabæus.

the whole time; but the rest gathered together in companies, knit their brows, gnashed their teeth, and yelled as if they intended to attack him. We wish they had with all our hearts, and to some purpose, too, though we have great respect for philosophers in general, and for zoologists in particular.

Before we proceed to the Baboons, we must not forget a curious form which is placed by some naturalists among the *Guenons*. The Proboscis Monkey* unites in its person the unshapely corpulence of the Orangs, with the long arms of the Gibbons and the guttural sac of the Howlers. Its physiognomy defies description. Diego's feature shrinks into insignificance—though he had been to the Promontory of Noses and got him "one of the goodliest that ever fell to a single man's lot"—in comparison with the proboscis of the *Kahau*. He who has only seen stuffed specimens, can have no idea of the hideous mask that the undried face presents; for the protuberance is entirely cartilaginous, and can be inflated by the animal to a prodigious size. The Kahau is about three feet high when erect, and has a long tail. We saw one taken out of spirit in which it had been preserved, looking like one of those horrible female fiends sometimes pictured in old wood-cuts—

"Not uglier follow the night hag."

A celebrated French naturalist, who was present at the opening of the casket which contained this zoological jewel, was in raptures, and, as the bust emerged, he uttered an exclamation significatory of her maternity. We looked in vain for the young imps, which had probably escaped when their poor barrelled-up mother fell. It must be startling to look round in the wildernesses of Borneo, and behold one of those horrible visages peering, Zamiel-like, from behind the trunk of some dark tree. At sunrise and sunset these animated caricatures assemble in the woods that border the rivers. Then and there they continually ply their guttural sacs and sonorous noses, till the vicinage echoes again with a cry, supposed to be expressed by the word "Kahau" often repeated; and hence their name. Their activity is energetic, and they will bound from tree to tree, clearing an intermediate space of from fifteen to twenty feet.

Passing by the *Douc*, or Cochin-China Monkey,† with its many-coloured coat, for its manners are little known, we must now call the reader's attention to forms in which monkey-depravity seems to reach its height.

* Nasalis larvatus, Geoffroy; Guenon nasique, Desmarest, Le Kahau, Audebert.

† Lasiopyga nemæa.

The Baboons concentrate all that is fierce, malicious, and disgusting. There are two tribes of these enormously powerful and furious brutes. The first, and best, are distinguished by having their nostrils situated on the face, so to speak; the second form the group of Dog-headed Baboons, *Cynocephali*, and in them the nasal aperture is placed at the end of the muzzle.

Of the more gentle tribe, the Wanderow* presents itself as a good example. This "Child of the Sun," as our showmen used always to designate it—why, heaven only knows, unless, as the French have done their best for Diana, the English are determined that they will not be behind their neighbours in doing honour to her glorious brother—wears a uniform of deep black, with the exception of the ruff, beard, or mane, which surrounds the face, and varies from ashy-grey to pure white. This ornament may have assisted in fixing the parentage above alluded to, and may have reminded the Polito-people of the jolly face of Sol, looking out from his radiant circumference, over mine host's door. Father Vincent Maria, who observes that there are four monkeys on the coast of Malabar, hath executed a flattering portrait of our friend; and here is the picture, drawn by the hand of that worthy procurator-general of the Bare-footed Carmelites. "The first is perfectly black, clothed with glossy hair, with a white beard round his chin, a span or more in extent. To him all the other monkeys show such deep respect, that in his presence they are submissive and humble themselves, as if they were aware of his pre-eminence. The princes and great lords esteem him highly, for that he is, above every other, gifted with gravity, capacity, and a wise appearance. Easily is he taught to perform a variety of ceremonies and courtesies, and all these in so serious and perfect a style, as to make it matter of great wonder that they should so exactly be enacted by an irrational animal."†

We have had our eye upon one or two of these Wanderows. There was one in the Zoological Society's collection, then in its infancy, in Bruton Street, and a right merry fellow was he. He would run up his pole and throw himself over the cross-bar, so as to swing backwards and forwards, as he hung suspended by the chain which held the leathern strap that girt his loins. The expression of his countenance was peculiarly innocent; but he was sly, very sly, and not to be approached with impunity by those who valued their head-gear. He would sit demurely on his cross-perch, pretending to look another way, or to examine a nut-shell for some remnant of kernel, till a proper victim came

* Macacus silenus.

† Gardens and Menagerie of the Zoological Society delineated. Vol. I.

within his reach; when, down the pole he rushed, and up he was again, in the twinkling of an eye, leaving the bare-headed surprised one minus his hat, at least, which he had the satisfaction of seeing undergoing a variety of metamorphoses under the plastic hands of the grinning ravisher, not at all calculated to improve a shape which the taste of a Moore, perhaps, had designed and executed. It was whispered—*horrescimus referentes*—that he once scalped a bishop, who ventured too near, notwithstanding the caution given to his lordship by another dignitary of the church, and that it was some time before he could be made to give up, with much mowing and chattering, the well-powdered wig which he had profanely transferred from the sacred poll to his own. The lords spiritual of the present day, with one or two laudable exceptions, are safe from such sacrilege: now, it would be nearly as difficult to take a wig off a bishop, as it once was to take the breeks off a Highlandman.

But another Wanderow confined in the open part of the gardens in the Regent's Park was of a different temperament. There was melancholy about this creature. He would climb his pole, ascend to his elevated house-top, and there sit for half an hour together, gazing wistfully at that distant portion of the park which presented, when viewed from his position, the appearance of a thick wood, every now and then looking down, as if he were contrasting the smooth-shaven painted pole to which they had fettered him, with the rugged living "columns of the evergreen palaces" of his fathers.

It is impossible not to feel some compassion for this persecuted race. Monkeys, generally speaking, never live long in confinement. How should they? The most restless and mercurial of animals, to whose existence the balmy fresh air, constant change of place, and prodigality of exercise, seem absolutely necessary, they are shut up for the greatest part of the year in close, sickly, noisome apartments, artificially heated and miserably ventilated; or often only ventilated by the admission of a current of cold air. Their lungs, poor prisoners, soon become affected, and strumous attacks gradually render the whole organization a mass of disease under which they pine and die. Those that are suffered to go at large, whether in houses, about the streets, on board ships, or at fairs (the favoured ones we mean who skip along the ropes and poles on the outside of the shows, to attract company), are better off: but hapless is the monkey doomed to the civilization of the menagerie.

Before we arrive at the more brutalized Baboon form, we must notice the Barbary Ape,* the only European Monkey. This

* Inuus sylvanus, Cuvier; Macacus sylvanus, Lacépède; Le Magot.

species has established itself on the rocks of Gibraltar, and next to the Green Monkey is the most frequent slave of the travelling showman or Thespian, a misfortune which it owes to its superior intelligence. Though apparently without a tail, it has, nevertheless, a small tubercle in the place of that organ. This is the ape that figures so often in fable both ancient and modern, and it is extremely probable that it was the only tailless monkey known to the Greeks. There is no doubt that it was the subject anatomized by Galen, whose account has been verified by the observations of Cuvier and of M. de Blainville.

Some of our readers may not have heard of an old story, of which, by the way, there is more than one version, setting forth how a strong party of these apes, headed by a knowing old cheiroped, gave so much annoyance to a certain regiment in garrison on the Rock, that at last they set their wits to work and succeeded in capturing the ringleader. Him they shaved close, both head and face. They then let him go. Away he scampered to his party who had been watching him at a distance, eager no doubt, to place himself again at their head, and lead them down to vengeance. He was received with a volley of sticks and stones, by his own troops, who treated him so roughly that he was forced to fly for his life. In this deplorable and degraded state he was fain to sneak back to his old enemies, the —th; and presented himself at their quarters so woe-begone, and with such a rueful visage "all shaven and shorn," that there was no resisting the appeal. He was admitted and remained with his new allies, whom he served with fidelity, upon the same principle that secures the faith of all other allies,—because he couldn't help it.

The Cynocephalous Apes, or true Baboons, which form the second tribe above alluded to, have a very low facial angle, varying in the adult from 30° to 35°. They may be naturally separated into those which have a considerable length of tail, and those whose tail, if tail it may be called, is dwindled into a mere tubercle with a tuft of hairs by way of finish. In captivity these apes (which are not however indocile, if taught during their youth) present a more undisguised and complete development of the active animal passions than is perhaps to be found in any other creature. Of large size, and proportions fitted for the exertion of great strength and agility, their fierceness is almost incontrollable, their paroxysms of rage being so violent, it is said, as occasionally to kill them. They are evidently capable of attachment, such as it is; and the following anecdote related by M. F. Cuvier well illustrates the dominion of passion over them. A Chacma,* kept

* Cynocephalus Chacma, Desmarest. It belongs to the section with long tails.

in the Paris menagerie, managed to escape one day from his cage, into the enclosure belonging to it. Irritated by the stubborn refusal of the baboon to return, his keeper, not very prudently, threatened him with a stick. This, instead of producing the desired effect, roused all the ferocity of the beast, and he flew at the unfortunate man, whom he wounded so severely in the thigh as to endanger his life. The Chacma continued at large, though almost every expedient to make him return to confinement was resorted to. No,—all would not do. At last it was recollected that the keeper's daughter, who had been kind to the prisoner, seemed to be a decided favourite; so the pretty Frenchwoman, *tirée à quatre épingles*, appeared at a grated door opposite to that of the cage through which the animal had to pass. But even so powerful a lure had no effect till a man approached the belle and pretended to caress her. This was too much; the poor jealous dupe could not bear the sight. He darted furiously through the open door of his prison at the hateful intruder, and was instantly secured. This was treacherous; but as the Lords of the creation themselves, from Sampson down to the Macheaths, have been the victims of the dear delightful deluders, a Chacma has no right to complain.

Cunning appears to be a principal feature in the character of the wild baboons. In their attacks, they commence operations at a distance, and endeavour to terrify their foes by their cries. Bands of these marauders are stated to be cruel enemies to the planter, and the author last quoted even goes so far as to declare that they will watch their opportunity and destroy a plantation from motives of revenge.

In the short-tailed section, consisting of the Drill* and Mandrill,† we have a personification of brutality, with just enough of humanity about the caricature to make it painfully striking, and to remind us of—

"All that the body perpetrates of bad."

The showmen name the Mandrill "the wild satyr of the woods," no infelicitous designation. "Happy Jerry," with his pipe of tobacco and glass of sling, was about as odious a looking monster as the debauched Falri himself.

The Gibbons, or long-armed Apes,‡ are, generally speaking, as mild and amiable as the Baboons are savage and disgusting. The entire absence of the tail is well compensated by the extraordinary length of the anterior extremities, and the agility of the tribe is quite surprising. They seem to represent in the old continent the Mycetes or Howling Monkeys of America. In

* Papio leucophæus. † Papio Mormon. ‡ Hylobates, Illiger.

some of the genus, which has hitherto been found only in India and its islands, the guttural sacs are so extensive as to be visible externally from their protrusion, and all of them howl.

These Gibbons, notwithstanding their long and sharp canine teeth and length of upper limb, present, in many of the species, a very human appearance; and, if all tales be true, rival the Orangs in their mimicry of human actions. Dr. Burrough's male Hoolock* which came from Goalpara, on the Burrampooter river, would take hold of the Doctor's hand, and, assisting himself with his other arm, walk with him. He would come at his master's call, seat himself in a chair by his side at the breakfast-table, and help himself to an egg, or to the wing of a chicken from the plate of the Doctor (who seems to have indulged in praiseworthy breakfasts), partaking of the coffee, chocolate, milk, tea, and other liquid adjuncts; sometimes, indeed, contenting himself, like the great Grimaldi, with dipping his fingers into the vessel and licking them, but, when thirsty in earnest, lifting the cup and drinking, not from the rim, but as a man drinks when he applies his mouth to the surface of a well or spring. Boiled rice, boiled bread and milk with sugar, plantains, bananas, and oranges, were relished, but bananas seemed to gratify him most. He had, however, a low taste for insects, and would search into crevices for spiders: as for *blue bottles*, he would catch them in his hand with a dexterity worthy of the silly Single himself. The poor animal was very affectionate to the Doctor, who appears to have been a most kind-hearted protector, and used to comb and brush his pet, to the great delight of the latter, who always acknowledged his master's morning appearance with a loud, shrill, and often-repeated "Whoo!" But—

"A favourite has no friend;"

and the poor monkey was killed by a blow across the loins with a small stick, inflicted by some lout of a servant—inadvertently, as it is said. There was another, a female about nine months old, in the possession of the Doctor, who did all that he could for his little patient in the way of castor oil, calomel, and warm baths, but she "died one day." The sufferer laboured under great pain and oppression in the chest: it is affecting to read of the eagerness with which she hurried back to the soothing comforts of the bath when she was removed from it, and lay there in comfortable quiescence as long as she was permitted.

Among these apes, there is a curious Sumatran form,† with the first and second fingers united up to the middle of the second phalanx. The Siamangs, as they are called, are supposed by the

* Hylobates Hoolock, Harlow.

† Hylobates syndactyla. Simia syndactyla, Raffles.

Malays to be conducted by a head or chief, who has the character of being the strongest of the party, and is believed to be invulnerable. Like other leaders, he directs their motions, and presides at their morning and evening howlings. Authors give very contradictory accounts of the disposition of this species. Some zoologists characterize the animal as stupid, dull, and inactive, whilst others describe it as being remarkably tractable and brisk, showing a lively affection towards those who behave kindly to it, and never so happy as when in society. The truth seems to be, as the groom said of the horses, "they've a got their different tempers just like we Christians." At all events, the lady Siamangs are most excellent mothers, and carefully preside over the ablutions of their little ones. These they carry to the banks of a stream, wash them thoroughly, notwithstanding their cries and kickings, and then wipe them dry, after the most approved methods of conducting the baby-toilette.

We now come to those forms of which such marvellous stories have been told. The Orangs, or "Wild men of the Woods," for a long time enjoyed a reputation almost human, a reputation kept up by the prints and drawings which formerly placed them almost uniformly in an erect position, and by the tricks which those brought to Europe were taught. But neither is the Asiatic nor the African Orang formed for erect progression. If left to themselves, they move on the ground most awkwardly, doubling their anterior hands, moving in their advance upon the knuckles, and resting upon the outward edge of the posterior feet. Among trees they are as active and rapid in their motions as they are clumsy and slow on the ground.

The anterior extremities of the Orang Utan* are nearly as long as they are in *Hylobates*; the hands, in this Asiatic, reach nearly to the heels. There is a marked difference between the skull of this species and the crania of *Hylobates* and of the Chimpanzee. The interparietal crest in *Pithecus satyrus* is as highly developed as it is in the carnivorous tribe, and the zygomatic arch is widely expanded; nor are these the only points of resemblance. In the Hoolock and in the Chimpanzee the skull is comparatively smooth and human on its outward surface.

Sumatra and Borneo are the principal localities where the Orang Utan has been hitherto found; and those which have been brought to Europe have exhibited a considerable degree of intelligence, though, as far as our experience and information go, not so high a degree as is manifested by the Chimpanzee. An Orang Utan, brought to England by Captain Methuen, made no attempt to escape when suffered to be at large before he was shipped, but

* Pithecus satyrus.

became violent when incarcerated in a bamboo cage. He, at first, shook the rails violently, but, finding that they did not yield to his efforts, he tried them separately, pitched upon the weakest, and perseveringly worked at it till he broke it and regained his liberty. Then they tried to confine him by a chain fastened to a strong staple; he soon unfastened it, and ran off. Finding the incumbrance of the chain, as he dragged it after him, he collected it into one or two coils and threw it over his shoulder: this he did, as occasion required, till, finding that it slipped from his shoulder, he held it in his mouth. At last he was suffered to roam freely about the ship, and became a general favourite from the grave playfulness of his manners and his burlesque of human actions and passions. Among other feats he stole the captain's brandy-bottle, and did his best to throw a cage full of small monkeys overboard. This propensity to monkey-murder has been observed in most of the individuals who have had an opportunity of shewing it: as if the Orangs considered the monkeys libellous caricatures upon their more dignified development, and were eager to get rid of their irritating presence. When refused what he wanted he would roll himself on deck, and behave as naughtily as any froward child could; nay, if the refusal were persisted in, he would suddenly rise, and, uttering piercing screams, rush over the ship's side, as though, in his despair, he were going to throw himself into the sea. At first the captain and his crew actually thought that they had carried the joke too far, and driven their cheiroped shipmate to commit suicide; but, on searching, they found him concealed under the chains.

The individuals, however, brought to this country, give but a faint idea of the size and appearance of a full-grown Orang Utan. Mr. Owen, in his highly interesting memoir on the osteology of this species and the Chimpanzee, gives the height of the Orang Utan as under five feet; but, according to Dr. Abel, its stature when adult is, sometimes at least, much beyond that limit.

In the "Asiatic Researches," the Doctor lays before us an account of a scene in which one of these unfortunate Orangs was a principal actor, or rather sufferer; an account which no one can read without pain:—

A party from a brig had, it appears, landed at Ramboom, on the north-west coast of Sumatra, to procure water. The place was much cultivated, and there were but few trees; on one of these trees they discovered a gigantic animal. They approached, and he came to the ground. They pursued, and he made for another tree at some distance, presenting to his pursuers a tall

man-like figure covered with a fell of shining brown hair, moving almost erect with a waddling gait, sometimes assisting his progress with his hands, and sometimes by the impulse of a bough which he held. On gaining a small clump, he sprang at a bound to a lofty branch, and passed from one limb of the tree to another with the greatest ease and alacrity. They felt that, if the country had been well wooded, he must, in all probability, have escaped; for he travelled from tree to tree with the swiftness of a horse on the ground. Confined as he was to only a few trees, his movements were so quick that it was very difficult to take aim, and it was not till his hunters had cut down one tree after antoher, that they were able effectually to begin their butcher-work. Five balls pierced the wretched creature before his exertions relaxed; then, reclining, apparently exhausted, on one of the branches, he copiously vomited blood. Still he held on; and their ammunition being all expended, they proceeded to cut down the tree, convinced that he was so far gone that they could then secure him without trouble. The tree nodded to its fall; but, as it was falling, they, to their surprise, saw him gain another, and they were obliged to cut down all the trees before they could bring him to the earth. Even then, mangled as he was, he made a most determined defence against the numbers who attacked him with spears, large stones, and other missiles. He broke the shaft of one spear—it was made of a supple wood, and would have withstood the strength of the stoutest man—"as if it had been a carrot," to use the words of the narrator. Those who aided in this slaughter acknowledged that they were distressed by the human-like expression of his countenance, the piteous manner in which he applied his hands to his wounds, and the whole bearing of the dying combatant. They confessed that the sight was such as almost to make them question the nature of the act they were committing. He lay dead before them, upwards of six feet in length at the lowest computation, according to the narrative.

We know not what view their worships of the unlearned societies may take of this transaction, for there is no telling how far a zeal for science may carry its votaries,* but to the unlearned it must look rather murderous.

The captain, who furnished Dr. Abel with the details, stated

* We remember to have heard of a clause said to have been in the directions given, many years ago, to a commander of an expedition of discovery, somewhat to the following effect:—"You are to avoid collision with the natives; but if, unfortunately, such an event should happen, and one of them should be killed, you will preserve the body in spirit and bring it home for examination."

that the creature was a full head taller than any man on board, measuring seven feet in what might be called his ordinary standing posture, and eight feet when suspended for the purpose of being skinned. Dr. Abel describes the skin, dried and shrivelled as it was, as measuring in a straight line, from the top of the shoulder to the part where the ancle had been removed, five feet ten inches; the perpendicular length of the neck, as in the preparation, three inches and a half; the length of the head from the top of the forehead to the end of the chin, nine inches; and the length of the skin still attached to the foot, from the line of its separation from the leg, eight inches. "We thus," says Dr. Abel, "obtain seven feet six inches and a half as the approximate height of the animal." These dimensions are startling, and far exceed those warranted by the skeletons of adult Orangs hitherto brought to this country.

The hair of the head was of a reddish brown, growing from behind forwards, and five inches in length. The chesnut-coloured beard was handsome, but very wiry, and appeared to have been curly in life, springing gracefully from the upper lip, near the angles of the mouth, in the form of moustaches, and thence descending to mingle with the portion growing on the chin.

The personage who has lately arrived at the gardens of the Zoological Society in the Regent's Park, and is now the "observed of all observers," is of the softer sex, and very young. She receives company in the Giraffe-house, and appears amiable, though of a gravity and sage deportment far beyond what is usual at her years. When we first saw her she was standing by her gentleman in waiting, who was patting her head and tickling her chin—familiarities which far from offending her, were admitted with the utmost complacency. Presently, however, she left him, evidently with the intention of making the acquaintance of a carpenter, who was kneeling with his back towards her, making some alterations in her apartment. It sounded odd to hear the gentleman in waiting say, as she laid her hand on the carpenter's shoulder, "Come, Jenny, you must leave the carpenter alone," at the same time gently leading her away. "Dear me!" said a lady; "Dear me! does she know what is said to her?" "Yes, she knows her name, Ma'am," was the cautious reply: upon which the lady said "Dear me!" again.

Finding that she was checked in her proposed *liaison* with the carpenter, Jenny moved quietly into the box which served her for a bed-room, arranged her blanket, made a wisp of straw into a bundle for a pillow with dexterous manipulation, and then lay down at her ease upon her back with her straw-pillowed head towards the entrance of the box, still gazing, as she lay, at her

carpenter. As we have not observed her *parure* noticed in any of those "glasses of fashion," French or English, which abound in this metropolis, we think it right to state that her dress consists of a fine Welsh flannel chemisette, with continuations of the same, *à la Turque*, over which she wears a robe, seldom seen on the ladies of this country, called a Guernsey frock. She looks very comfortable, but we would advise our friends to pay their respects as soon as they conveniently can; for, though the temperature of the Giraffe-house is very good, experience has taught us not to consider the lives of such foreigners as Jenny very insurable.

In the Chimpanzee,* the African type of Orang, the arms are very much shortened, not reaching much below the knee; and the thumbs and great toes are much more developed than in the Orang Utan. There are some points in which the latter comes nearer to man than the former; but the Chimpanzee, taken altogether, is much more human in its conformation. Still, as we have before observed, there is a wide interval between the Simian and Human forms.† This is strongly shown in the countenance. Lawrence well says that the brute face is merely an instrument adapted to procure and prepare food, and often a weapon of offence and defence. The human countenance is an organ of expression, an outward index of what passes in the busy world within.

* Troglodytes niger.

† We feel that this is no place for anatomical detail, and yet it may not be amiss to draw the reader's attention to one or two of the many points on which this assertion rests. In man, the muscle called *flexor longus pollicis pedis* terminates in a *single* tendon, and its force is concentrated in the *great toe*—the principal point of resistance in raising the body upon the heel. In the orang, the analogous muscle has its termination in *three* tendons separately and exclusively inserted in the three middle toes, to enable them to grasp more forcibly, and so minister to the necessities of an arboreal animal. "Surely," says Mr. Owen, who brings forward this striking difference, "it is asking us too much to require us to believe that in the course of time, under any circumstances, these three tendons should become consolidated into one, and that one become implanted into a toe to which none of the three separate tendons were before attached." Then again there is the discrepancy in the shape and disposition of the teeth. "What external influence," as the same acute author inquires, "operating upon and around the animal, can possibly modify in its offspring the forms, or alter the size, of the deeply-seated germs of the permanent teeth? They exist before the animal is born, and let him improve his thinking faculties as he may, they must, in obedience to an irresistible law, pass through their phases of development, and induce those remarkable changes in the maxillary portion of the skull, which give to the adult orangs a more bestial form and expression of head than many of the inferior *Simiæ* present." The osteology and myology of these animals, to say nothing of the rest of their structure, forbid the conclusion that the monkey could by any ordinary natural process be ever expanded into Man.

To repeat the stories so well known of the life, character, and behaviour of the Chimpanzee, would be to occupy space on which we have already trespassed, to say nothing of its renewing the "*Infandum*, &c." Poor dear Tommy, we knew him well, and who is there who was not, at least, his visiting acquaintance? Was he not immortalized in the *carmen zoologicum* of the illustrious Bull? Peace be with him! Everybody loved him; everybody was kind to him. In his last illness he was suffered to come forth for a closer enjoyment of the kitchen fire; and there we saw him sit, "leaning his cheek upon his hand," watching the gyrations of a depending shoulder of mutton, as it revolved and hissed between him and the glowing grate—no, not with the prying mischievous eyes of ordinary monkeys; but with a pensive philosophic air that seemed to admit his own inferiority, and to say—"Ah! man is, indeed, *the* cooking animal."

January, 1838.

ELEPHANTS.

PART I.

"Of all the Beasts which thou *This-day* did build,
To haunt the Hils, the Forrest, and the Field,
I see (as Vice-Roy of their Brutish Band)
The *Elephant* the Vant-guard doth command:
Worthy that office; whether we regard
His Towered back, where many Souldiers ward;
Or else his Prudence, wherewithall he seems
T' obscure the wits of human-kinde sometimes:
As studious scholar, he self-rumineth
His lessons giv'n, his king he honoureth,
Adores the moon: moved with strange desire,
He feels the sweet flames of th' Idalian fire,
And (pierc't with glance of a kinde-cruell eye)
For humane beauty, seems to sigh and dye.
Yae (if the Grecians doe not mis-recite)
With's crooked trumpet he doth sometimes write."

DU BARTAS: *The Sixth day of the First Weeke.*

THESE lines are translated "by y^t^. famous *Philomusus*, IOSVAH SYLVESTER, Gent.," as we are informed in the quaint title-page of the folio edition, printed at London in 1633, by Robert Young, who collected his "most delight-full Workes," and gave them to the public with the following dashing address:

"THE PRINTER TO THE READER.

"The name of *Joshua Sylvester* is garland enough to hang before This doore; a name worthily deare to the present Age, to Posteritie. I doe not therefore, goe about to apologize for this Worke, or to commend it: it shall speak for itselfe, louder than eyther others' friendship or envie. I only advertise my Reader that since the death of the Author (if at least it be safe to say those men are dead who ever survive in their living monuments) I have carefully fetcht together all the dispersed Issue of that

divine Wit: as those which are well worthie to live (like Brethren) together under one faire roofe, that may both challenge time, and outweare it. I durst not conceale the harmless fancies of his inoffensive youth, which himselfe had devoted to Silence and Forgetfulness: It is so much the more glory to that worthy Spirit, that hee who was so happy in those youthful strains (some whereof, lately come to hand, and not formerly extant, are in this edition inserted) would yet turne and confine his pen to none but holy and religious Dities. Let the present and future times injoy so profitable and pleasing a work, and at once honour the Author, and thank the Editor."

The book is got up in the best manner, dedicated to gentle King Jamie, and with its *Anagrammata Regia*—"Jacobus Stuart, Justa Servabo, James Stuart A just Master," for example—and its pilastered "*Corona Dedicatoria*," forms a very curious and characteristic specimen of the Euphuistic and *Garamna* literature of the time. But, alas for posthumous fame! how few of the present generation have even heard of Sylvester? Were it not for the imperishable Isaak Walton,* what would be known of Du Bartas himself? There is much more about the Elephant, and the way in which the Dragon circumvents and kills the huge beast, in verse which, although it might have sounded charmingly in the ears of the Royal Apprentice, our readers would hardly thank us for disinterring.

Before we enter upon the natural history of the Elephant, and the uses to which he has been applied either in war, the chace, the procession, or the theatre, we will, with the reader's leave, take a rapid view of the organic structure of the huge animal, beginning with the gigantic bony framework.

One of the first particular objects that strikes the beholder after the mind has recovered from the impression which the colossal whole never fails to produce, especially when the skeleton of a full grown male is viewed in front, is the enormous size of the cranium; and few of those who are not conversant with the organization of the skull, with its broad anterior expanse, fail to express their surprise at its proportions, or to inquire how a weight apparently so great is supported.

The muscles necessary for working the complicated, powerful, and delicate evolutions of the trunk or proboscis, require a broad surface for their attachment; and ponderous as the skull seems, it is in great part weighty in appearance only. The chamber of the brain, which last forms in the elephant $\frac{1}{50}$ of the whole body, is but of comparatively small extent, although there is

* "Compleat Angler," ch. i.

ample room for that grand centre of the nervous system in proportion to the necessities of the animal; and many who have heard of or witnessed its sagacity, deceived by appearances, come to the conclusion that the development of the brain is commensurate with the external surface. If this had been the truth, we should probably have had in the elephant a forty-man reasoning power imprisoned in a frame utterly unfit to carry out the ideas and reflections engendered in that brain, which would have been but inadequately protected from the dangers surrounding a creature whose food is principally obtained by breaking down large branches of trees, and uprooting others of no small dimensions. But as it is, the forehead, with its great frontal sinuses, which are larger in the elephant than in any other animal, may be safely used as an immense battering-ram to clear away all obstructions in its path, whilst comparative lightness is secured by the extensive, thin, but firm cellular texture which is so largely developed between the outer and inner tables of the cranium, and becomes an almost impregnable fortification to secure the brain from external danger. It is well known to hunters that the place to which their aim is best directed in elephant shooting is behind the ear,—the vulnerable point by which the massacred Chunee was reached at Exeter Change, after his cruel and clumsy foes had been blazing away at him in front till they were weary; and the back part of the cranium is the thinnest and least protected, because it is less exposed to danger.

In the museum of the Royal College of Surgeons of England is the skull of a fine Ceylonese elephant, which has, at some time long passed, been the living target for the rifle of the hunter. There are three bullet wounds, all healed, in the face, and the bullets are still, without doubt, lodged in the reticular *diplöe* between the two tables of the skull which we have above attempted to describe. One of these wounds is in the forehead. The marksman had evidently aimed at the point where the nasal aperture is situated, and if the ball had entered there it would have only had to encounter the comparatively thin wall of bone at the back of the chamber, and would in all probability have brought the animal down. The second hole is a little to the left of the chamber. The third ball had passed through the upper part of the great temporal muscle of the right side, and entered far into the osseous net-work. On introducing a finger into this wound, a smooth-walled circular bony canal is felt as far as one can reach, so admirably has nature completed the curative process.

Still when we remember that in man the brain forms from $\frac{1}{18}$ to $\frac{1}{36}$ of the body, the proportion in the elephant does seem somewhat of the least; but small animals have, generally speaking,

a greater brain in proportion to their body than larger ones—in a mouse, for instance, the proportion is $\frac{1}{17}$ in a canary bird $\frac{1}{14}$—and the pachyderms, as a class, have it very small.

But, notwithstanding these provisions for lightening the burden, the mass to be supported on the neck is enormous: the tusks, the teeth of the upper jaw, the proboscis, and the heavy under jaw, form together the greatest weight that the muscles of the neck and back of any terrestrial animal have to bear. The elevated and roughly-knobbed spinous processes of the vertebræ afford ample surface for the attachment of the ligaments and muscles that support and wield the enormous head, tusks, and trunk; whilst, in the cranium itself, the great temporal fossæ make room for the massive crotaphite muscles to suspend and work the ponderous under jaw.

Old elephants have but one tooth on each side of their jaws; nay, they have seldom, till they are aged, a perfect tooth at all: for as the jaws continue to grow, the new or succeeding tooth acts partially only at first, and then may be seen two teeth in action. When this advancing tooth has come so forward as to be considerably exposed, the old tooth, reduced and decayed by the pressure of its successor, is shed. This is repeated as long as the animal continues to grow; but when the growth of the jaw stops, the elephant has no longer more than a single tooth to depend upon. The new or advancing grinder is formed not under, but immediately behind the old tooth, and the anterior end of the new tooth comes into play long before the old one is ripe for shedding. Thus the grinding surface is increased and continued by both, till age reduces the elephant to a single tooth. The beautiful provision of bone-forming pulps or plates which unite with the enamel-forming pulps to make the strong and compact compound molar teeth, may be well seen by steeping one of them in acid.

The tusks, or, as they were anciently and erroneously deemed, horns, are formed upon a different principle. Instead of a succession of plates, the ivory is deposited by successive secretions of a vascular pulp, in very thin layers, from within. The hollow in an elephant's tusk is familiar to most: this cavity is the seat of the pulpy substance in which are not unfrequently found foreign bodies, such as musket balls, which have entered through the wall of the hollow part of the tooth when the ivory was in its soft state, and have become firmly imbedded in the ripened and hardened tusk.

The enormous size that these offensive and defensive weapons acquire in fine old males is still manifested by specimens which

have been kept, on account of their great development and beauty, and saved from the manufacturer. These ponderous tusks are held in the upper jaw not by any adhesion to the pulpy root, as it may be termed, but by the elasticity of the parts alone, somewhat in the same way that a nail keeps its place in a plank. Some notion may be entertained of the high degree of vascularity of the tusk from an accident that happened to one of the elephants formerly kept at Exeter Change. The animal nearly bled to death from the laceration of the vessels of the pulp contained in the cavity for the purpose of supplying constant internal additions of successive laminæ, as the tusk is worn down externally.

Mr. Lawrence, in a note to his translation of Blumenbach, thus lays before us the modes in which a foreign body may become set, as it were, in the surrounding ivory.

"We can explain very satisfactorily how a bullet may enter the tusk of an elephant, and become imbedded in the ivory without any opening for its admission being perceptible. It will be shewn in a subsequent note, that these tusks are constantly growing during the animal's life, by a deposition of successive laminæ within the cavity, while the outer surface and the point are gradually worn away; and that the cavity is filled for this purpose with a vascular pulp, similar to that on which teeth are originally formed. If a ball penetrate the side of a tusk, cross its cavity, and lodge in the slightest way on the opposite side, it will become covered towards the cavity by the newly deposited layers of ivory, while no opening will exist between it and the surface to account for its entrance. If it have only sufficient force to enter, it will probably sink by its own weight between the pulp and tooth, until it rests at the bottom of the cavity. It there becomes surrounded by new layers of ivory; and as the tusk is gradually worn away, and supplied by new depositions, it will soon be found in the centre of the solid part of the tooth. Lastly, a foreign body may enter the tusk from above, as the plate of bone which forms its socket is thin; if this descends to the lower part of the cavity, it may become imbedded by the subsequent formations of ivory. This must have happened where a spear-head was found in an elephant's tooth. The long axis of the foreign body corresponded to that of the cavity. No opening for its admission could be discovered, and it is very clear that no human strength, could drive such a body through the side of a tusk." (*Phil. Trans.* 1801. Part 1.)

The greatest recorded weight of a tusk known to us is three hundred and fifty pounds: the tooth was sold at Amsterdam.

Topsell, to whose work, quoted by Izaak Walton in the seventh chapter of the first edition of his "Compleat Angler," and in the eighth of the second, we shall presently draw attention more at large, mentions a book on Judæa without the name of the author, who affirms that he saw an elephant's tooth sold to a Venetian merchant for six-and-thirty ducats, fourteen spans long, and four spans broad, and it weighed so heavy that he could not move it from the ground. "Vartomanus also saith," continues Topsell, "that he saw in the Isle of Sumatra, two elephant's teeth which weighed three hundred six-and-thirty pounds."

The other longest measurements stated are nine feet, and, in one instance, upwards of fourteen feet. What stupendous brutes must the owners of these tusks have been! A length of from six to seven feet and a diameter at the base of from five to six inches, are considered now as dimensions above the usual average.

Without wearying those who may take up this sketch with a description of the entire massive skeleton, there are some points on which we may perhaps touch without being tedious. Unlike the herd of mammiferous animals, the thigh bone of the elephant wants the smooth round ligamentous chord* which moors, as it were, the round head of the femur in man, and in the greater part of quadrupeds to the round hip-socket† in which it moves. The want of this ligament is supplied, in the elephant, by the projecting acetabulum, which closely embraces, and nearly hides the round head of the bone in its deep, and nice-fitting cavity, wherein the ball of the femur is so safely secured, that dislocation is almost impossible without fracture of this part of the pelvis.

The travelling showman *now* enlightens the gaping spectators that crowd his booth at a country fair with—"Some says as elephants got no joints in their legs, but that ere's fablous;" and yet there was a time when the popular belief—originating, no doubt, in the stiff march of the animal, which results in a motion so disagreeable to the rider, when compared with the easy paces of a horse, arising from the more complicated machinery of the limbs of the latter—was so strong, that Sir T. Brown found it necessary to set himself seriously to refute it as a vulgar error. Strength, certainly, rather than flexibility, is the principle on which the legs of the elephant are formed. But *Ulysses*, in "Troylus and Cressida," says,

> The elephant hath joynts, but none for curtesie;
> His legges are legges for necessity, not for flight.‡

And yet when the animal kneels he bends his hind legs, like a man does when he assumes the kneeling position. Sir T. Brown

* Ligamentum teres. † Acetabulum. ‡ Folio.

in his third book "Of divers popular and received Tennets concerning Animals; which examined, prove either false or dubious," says, "The first shall be of the elephant; whereof there generally passeth an opinion, it hath no joynts; and this absurdity is seconded with another, that being unable to lie down, it sleepeth against a tree: which the hunters observing, do saw almost asunder; whereon the beast relying, by the fall of the tree, falls also down itself, and is able to rise no more."

It would be a waste of space at this time of day, to follow Sir Thomas through his learned and grave refutation of this absurdity, the more extraordinary, inasmuch as though there are not wanting passages in ancient authors to countenance it, there are multitudes of others referring to actions by elephants which could not be performed without flexure of their joints, and some which expressly describe genuflexion and lying down.

Propped upon the high, huge limbs, which look like great columns when the animal is at rest, and even when in ordinary progression, how was the elephant, with his extremely short, compact neck—a compactness and brevity necessary to the easy support of the colossal head—to reach the succulent plants beneath it, or even any vegetable production that was not upon a level with its mouth? The cervical vertebræ of the ruminants generally, are so modified as to enable the animal to crop with ease the herbage of the field; and in the giraffe, the neck is so extremely lengthened as to lift its towering head above the acacias on which it principally browses, while its flexibility enables the animal to apply its prehensile tongue and lips to any food that may suit it, from the ground to a height of eighteen feet.* In the horse and other pachyderms, which are grazers, the proportions of the legs and neck are so adjusted, that the mouth reaches the ground with ease, as the spectator immediately perceives when he sees their skeletons only. But place a man who has never seen an elephant in the flesh, or a pictorial representation of the animal, before its skeleton, and one of his first mental inquiries will be, "how was the creature fed?" The moment you explain to him that the shortness of the neck was compensated by a long flexible proboscis, which depended from the head, between the tusks, capable of touching the ground, or of reaching to that extent above the head, the problem is solved.

* On the night of the 25th of February in this year, (1844) Zaida, the female giraffe in the possession of the Zoological Society of London, gave birth, in the Regent's Park, to a fine healthy male, after a gestation of sixty-five weeks and three days, being the third of that sex produced by her in captivity at that place. She has since become the mother of a fourth male.—*See ante, p. 211, note.*

This wonderful organ—almost equal to the hand of man, superior to that of the apes—is, perhaps, the most elaborate piece of mechanism as yet known to us. In consequence of the space necessarily occupied by the sockets of the tusks, the nasal bones are limited in their development; and the nostrils in the skeleton are situated towards the upper part of the face. But in the living animal they are prolonged into a cylindrical proboscis, endowed with exquisite sensibility, the utmost facility of motion, and enormous strength. At its distal extremity is a small muscular appendage, which has aptly been termed the finger. Between thirty and forty thousand muscles, enable the elephant to extend this animated instrument, shorten it, and bend it in every direction, so that there is hardly any curve or position which it cannot assume at the will of the animal, nor any substance, large or small, with which it cannot grapple. One of the most philosophical poets of ancient Rome uses the term "anguimanus," or "snake-hand," to designate an elephant; and her greatest orator terms the proboscis "the elephant's hand." Even the rude Caffre, when he has slain one of these huge beasts, is said to amputate the trunk with a feeling of awe, and, as he solemnly buries it, to exclaim, "The elephant is a great lord, and the trunk is his hand."

But this is not all. The proboscis is the elephant's pump, his drinking-cup, his water reservoir, his *jet d'eau*—from whose fountain he besprinkles his broad back and ample body—his powdering apparatus, wherewith he puffs the collected dust over his moistened hide to protect it from flies, his foraging instrument, with which he collects his food, from the enormous leafy branch torn from the lofty tree, to the stalk of grass, or the barleycorn picked up from the ground, his tooth-brush—we have seen one rub his teeth with mud dentifrice by its aid—and his all-powerful arm. Such is this wonderful concentration of might and skill, capable of the most tremendous exertion, and the most delicate adjustment, now dashing a strong living man against a wall, from which he falls a mashed and blood-stained inanimate mass, at the behest of an eastern tyrant, and anon gathering up the comfits granted as the terrible brute's reward.

This "proboscis," or "promuscis," as it was termed by the ancient Italians, was so named, with reference, in all probability, to the organ by which flies, "muscæ," take their food; indeed, Cardan, comparing the proboscis of the beast with that of the insect, remarks, that whilst nature was framing a gnat, she was meditating on the production of an elephant; for which conceit he receives a most unsparing castigation at the hands of the sar-

castic Scaliger. Ἐπιβοσκὶς (*epiboscis,* or feeder,) was the Greek word used to designate the proboscis of a fly.

Edward Topsell, who was, "Chaplaine in the church of Saint Buttolphe, Aldergate," to "The Reverend and Right Worshipfull Richard Neile, D. of Divinity, Deane of Westminster, Maister of the Savoy, and, Clearke of the King his most excellent Maiesties Closet," in his rare "Historie of Four-footed Beastes,"* which is generally considered to be one of the first, if not the first book on Zoology written in Great Britain, thus quaintly describes the proboscis.

"His truncke called Proboscis and Promuscis, is a large hollow thing, hanging from his nose like skinne to the groundward: and when he feedeth it lyeth open, like the skin upon the bill of a Turkey-cock, to draw in both his meate and drinke, using it for a hand, and therefore improperly it is called a hand. For by it he receiveth of his keeper whatsoever he giveth him, with it he overthroweth trees, and wheresoever he swimmeth through it he draweth breath. It is crooked, gristly, and inflexible at the roote next to the nose; within, it hath two passages, one into the head and bodie, by which he breatheth, and the other into his mouth, whereby he receiveth his meate: and herein is the worke of God most woonderfull, not only in giving unto it such a diverse proportion and anatomie, but also giving him reason to knowe this benefite of it, that so long as he is in the water and holdeth up that trunck, he cannot perish.

"With this he fighteth in warre, and is able to take up a small piece of money from the earth; with it he hath beene seene to pull down the toppe of a tree, which twenty-foure men with a rope could not make to bend. With it he driveth away his hunters when he is chased, for he can drawn up therein a great quantity of water, and shoote it forth againe, to the amazement and the overthrow of them that persecute him."

The height of the elephant has been greatly exaggerated.

"Of all earthly creatures," says Topsell, "an elephant is the greatest: for in India they are nine cubits high, and five cubits broad; in Affrica foureteene or fifteene ful spans, which is about eleven foot high, and proportionable in bredth, which caused Ælianus to write that one Elephant is as big as three Bugils: and among these the males are ever greater than the females. In the kingdome of Melinda, in Affricke, there were two young ones, not above six months old, whereof the least was great as the greatest oxe, but his flesh was as much as you shall find in two oxen; the other was much greater."

* London: Printed by William Iaggard. 1607.

These dimensions are tolerably large; but an altitude of from seventeen to twenty feet has been ascribed by others to the elephants of Madras. The average height, however, seems to be under ten feet, measured from the wither or top of the shoulder: that of the skeleton of Chunee, in the Museum of the Royal College of Surgeons, is about nine feet six inches from the pedestal on which it stands to the top of the head; and the male elephant, now in the garden of the Zoological Society of London, in the Regent's Park, measures about nine feet six inches from the ground to the top of the shoulder. One belonging to a vizier of Oude was twelve feet two inches high when his head was raised, as he marched in state, and measured ten feet six inches from the ground to the top of the shoulder. This was the only instance known to Mr. Corse, who was indefatigable in collecting accurate information on the subject, of an elephant exceeding ten feet in height. He had indeed some trouble in getting at the truth of rumours spread abroad by those who had seen the animal, relative to the ultra-gigantic proportions of one at Dacca belonging to the nabob, and said to be about fourteen feet high.

Now Mr. Corse had formerly seen this very elephant, and then, judging from his eye, had supposed the height of the animal to be twelve feet. Determined to ascertain the fact, he set out for Dacca, where the mahout of the elephant in question assured Mr. Corse that his charge was from ten to twelve cubits high—in other words, from fifteen to eighteen feet, but that he dared not bring the animal for Mr. Corse's examination without the permission of the nabob. Mr. Corse, however, who from experience knew that the eye is occasionally endowed with a high magnifying power, especially in cases where old prejudices exist, was not to be satisfied with this evidence, direct as it was, and good as it seemed. He asked the nabob's permission to apply the test of actual measurement, it was granted, and the dimensions of the animal immediately shrank under its exact severity. Its height did not exceed ten feet. Le Vaillant, it is true, mentions an enormous African elephant which he wounded, and which, he says, was at least thirteen feet high, with tusks which, to judge by the eye, could not have weighed less than a hundred and twenty pounds each. But the animal escaped, and Le Vaillant had no opportunity of measuring it accurately.

Pringle, too, came suddenly upon a male of this species, which two officers of engineers, who were with him, and had been familiar with the sight of wild elephants, agreed was at least fourteen feet in height: here again there was no actual measurement.

The Asiatic is as fastidious with reference to the perfection of

his elephant as he is with regard to female beauty. Oriental writers dwell upon the normal points of loveliness in the form of woman; nor are they less particular in laying down the laws of proportion which ought to govern the full development of an elephant without blemish.

A perfect elephant must have long, rounded ears, without ragged or indented edges. His eyes, free from specks, should be dark hazel. Neither black nor dark spots of any size ought to disfigure the roof of his mouth or his tongue. His trunk must be large and well developed. His tail should be long, and the terminal tuft of hair should nearly reach to the ground. On each of his fore-feet there ought to be five nails, and on each of his hind-feet four, making his full complement eighteen. His head should be well set on, and carried high and stately. The curve of his back ought to rise gradually from the shoulder to the middle, whence it should decline to the setting on of the tail. His limbs must be strong, and his joints firm and well knit.

The quantity of food necessary for the support of this colossal frame is great, and the expense of keeping a large body of elephants, as was formerly the practice in India, for war or ceremony, must have been excessive. Akbar's own stud, kept for his personal use, amounted to one hundred and one, and the daily allowance to each was two hundred pounds of food. The greater number of them had, moreover, ten pounds of sugar, in addition to rice, pepper, and milk. Three hundred sugar-canes were daily supplied to each of them during the cane season. The elephant kept by Louis XIV. had a daily allowance of eighty pounds of bread, twelve pints of wine, and an enormous mess of vegetable soup, with rice and bread. These were his ordinary provisions, and he picked up no small gleanings besides in the shape of grass and presents from visiters.

The daily rations of Jack, the male elephant kept in the garden of the Zoological Society of London, and now about thirty-three years old, are a truss and a half of hay, forty-two pounds of Swedish turnips, a mash consisting of three pounds of boiled rice, a bushel of chaff, and half a bushel of bran, ten pounds of sea-biscuit, a bundle of straw for his bed, weighing about thirty-six pounds, which he usually eats by the morning, and thirty-six pails of water.

Besides this he collects no small portion of savoury alms from the public. Formerly his allowance was larger, and he had oats and mangold-wurzel; but at that time Sunday was a day of fasting with him (as it still is to the *carnivora*) only broken by a slight morning meal. Some four or five years ago he determined to stand this hebdomadal privation no longer, and for two or three

successive Sabbath-nights he made such a disturbance that the keepers had small repose. Finding that this hint was not taken, he went a little further next time, and so bestirred himself that, like other agitators who have known exactly how far to go, he carried his point; for he made an attack upon his door with such good-will and effect, that they were fain to get up in the middle of the night to feed him. Since this demonstration of physical force he has enjoyed his full meals on Sundays.

While writing this, a curious instance of his ingenuity has come to our knowledge. The boarded ceiling in front of his apartment is low, compared to the height within, but still it was thought to be sufficiently lofty. He has lately, tired probably by his long winter confinement, commenced operations upon it and pulled down some of the boards. The nice application of the tools with which nature has furnished him was cleverly manifested on this occasion. Raising his head suddenly, he drove his tusk through a board, splitting it with the blow; he then applied the finger of his trunk to the aperture, and tore away till he was found out and stopped. Nothing could be more unpromising than the smooth surface of planks above his head, or could have afforded less opportunity for grasping; but he tried it with his proboscis, found it hollow, and pierced it with his tusk, so as to obtain trunk-hold. This was very like reasoning.

The necessary daily aliment for the elephant in a state of domestication may be stated, on an average, at about two hundred pounds in weight. Twenty-five rupees a month is the modern Asiatic allowance for each elephant.

Le Vaillant had a view of the mode in which the wild African elephants feed, and he describes their method of purifying their ligneous salads before they become the grist of the powerful mill which we have attempted to describe. From the top of an eminence at the edge of a wood he perceived four in some very thick bushes, and taking care to get to the leeward of them he approached with great precaution. For half an hour did he survey them while they were eating the extremities of the branches. Before they took the branches into their mouths, they beat them three or four times with their trunks, in order, as he imagined, to shake off the ants and insects. This done, they grasped with their trunks all the branches they could, and conveying them to their mouths always on the left side, swallowed them without much chewing. He remarked that they preferred those branches which were best furnished with leaves, and that they were, besides, extremely fond of a yellow fruit, when it was ripe, which in the country is called a cherry.

But it would seem that after a long fast, or in moments of care-

lessness, the purifying process above noticed by Le Vaillant is occasionally neglected, for the worthy Topsell, drawing from the ancient legends, and especially from Pliny, who never let a wonderful story pass unnoted, tells us that "They live upon the fruits of plants and roots, and with their trunçks and heads overthrow the tops of trees, and eat the boughes and bodies of them, and many times upon the leaves of trees he devoureth chamæleons, whereby he is poisoned, and dieth if hee eat not immediately a wilde olive!" The bane and antidote are equally credible. Topsell then proceeds to state that they are so loving to their fellows that they will not eat their meat alone, but having found a prey "they go and invite the residue to their feastes and cheere, more like to reasonable, civill men, then unreasonable brute beasts." He thus describes the domesticated elephant's apolaustic propensities.

"It will forbeare drinke eight daies together, and drinke wine to drunkennesse like an ape. It is delighted above measure with sweet savours, oyntments, and smelling flowers, for which cause their keeper will in the summer time lead them into the meadowes of flowers, where they of themselves will, by the quickness of their smelling, chuse out and gather the sweetest flowers, and put them into a basket if their keeper have any; which being filled, like daintie and neate men, they also desire to wash, and so will go and seeke out water to wash themselves, and of their owne accord returne backe againe to the basket of flowers, which if they find not they will bray and call for them. Afterward, being led into their stable, they will not eat meat untill they take of their flowers and dresse the brimmes of their maungers therewith, and likewise strewe their roome or standing-place, pleasing themselves with their meat, because of the savour of the flowers stuck about their cratch, like dainty fed persons which set their dishes with greene hearbs, and put them into their cups of wine."

Great longevity was attributed to these quadrupeds. More than four hundred years of life were anciently supposed to be their portion, if their career was not shortened by sickness or accident. This enormous duration seems to have been allotted to them principally on the faith of a story relating to one marked in a particular manner, which was captured by a King of Lydia four hundred years after a battle in which this remarkable animal had figured. A little cross examination might possibly have thrown some doubt on the identity, and it is hardly necessary to observe how improbable it is that any living frame could sustain the wear and tear of four centuries. Still there are cases on record of elephants having been in captivity, in more modern times, for a hundred years, and even for a hundred and thirty, to which credit

ought not to be rashly denied. In a vegetable-feeding quadruped the duration of the teeth offers a fair criterion by which to judge of the probable extent of life, and we think that Sir Everard Home is the physiologist who has observed that the teeth of the deer and sheep are worn down in much less than fifteen years; those of the ox-tribe in about twenty years; those of the horse in forty or fifty years; while those of the elephant will last for a century. The longevity of the last-mentioned animal must be, therefore, in all probability very considerable, although falling far short of the ancient estimate.

The period of gestation is between twenty and twenty-one months. Mr. Corse records the birth of a fine young male thirty-five inches and a half high, at the expiration of twenty months and eighteen days. The breasts are situated on the chest, and the young one takes the nourishment with the mouth, not with the trunk, as Perrault and Buffon insisted, in contradiction to the actual observation of Le Vaillant. So much for the value of analogical reasoning by closet zoologists when opposed to the experience of out-door naturalists—men who have endured and still endure the greatest fatigues and privations, that they may watch the operations of nature in the forest and the desert, and too often reap for their reward the sneers of incredulous and ignorant critics, who have never passed the boundaries of sea-coal fires and sooty trees. The error of the trunk-sucking faction was strengthened by those who had seen the young elephant or calf, as it is termed, touching the breast of its mother with its proboscis; but it no more sucks with that organ than a child does with its hand.

All the young elephants seen by Mr. Corse, began to nibble and suck the breast, to use his own expressions, soon after birth, pressing it with the trunk to make the milk flow more readily. He says, that the mothers never lie down to give their young ones this first and natural food, and that it often happens when the dam stands high on her legs that she is obliged to bend her body towards her offspring to enable it to reach the nipple with its mouth. Mr. Corse well remarks that, if ever the trunk was used to lay hold of this part in the mother, it would be upon such occasions; and at this period, when the young one is making laborious efforts to reach it with the mouth, which it could at all times easily effect with its trunk, if that would have answered the purpose. He had often observed the young elephant grasp the nipple, which projects horizontally from the breast, with the side of its mouth, and he adds, that it is a common practice with the natives of India to raise a small mound of earth some six or eight inches high, for the young one to stand on, thus saving the

mother the trouble of bending her body every time she gives her calf the breast, an effort which she could not make with ease when tied to her picket.

The general evidence is in favour of the female elephants as affectionate mothers, and the painful story recorded by Bruce, whose heart was evidently a very kind one, shows that strong filial attachment is felt by the young.

After an animated description of an Abyssinian elephant-hunt, the African traveller thus concludes: "There now remained but two elephants of those that had been discovered, which were a she one with a calf. The agageer would willingly have left these alone, as the teeth of the female are very small, and the young one is of no sort of value, even for food, its flesh shrinking much upon drying; but the hunters would not be limited in their sport. The people having observed the place of her retreat, thither we eagerly followed. She was very soon found, and as soon lamed by the agageers; but when they came to wound her with their darts, as every one did in turn, to our very great surprise, the young one, which had been suffered to escape unheeded and unpursued, came out from the thicket, apparently in great anger, running upon the horses and men with all the violence it was master of. I was amazed, and, as much as ever I was upon such an occasion, afflicted, at seeing the great affection of the little animal defending its wounded mother, heedless of its own life or safety. I therefore cried to them for God's sake to spare the mother—though it was then too late, and the calf had made several rude attacks upon me which I avoided with difficulty; but I am happy to this day in the reflection that I did not strike it. At last, making his attacks upon Ayto Engedan, it hurt him a little upon the leg; upon which he thrust it through with his lance as others did after, and it, then fell dead before its wounded mother, whom it had so affectionately defended."

According to the interesting account of Mr. Crawfurd, upon whose narrative the most undoubting reliance may be safely placed, the young male elephants are weaned at Ava when they are three years old; in other words, they are there separated from their dams and broken in. Their youth and domestication, it might be thought, would render this an easy process; but it appears to be as tedious and difficult as the reduction of a full-grown elephant, captured in the forest, to obedient subjection.

Mr. Crawfurd relates, that previous to the commencement of the separation and tuition of the infant elephants, a ceremony, consisting of an invocation to the genius of elephant-hunting, who rejoices in the appellation of Nat Udin-main-so, is cele-

brated. Between the walls of the town, and an artificial mount verdant with trees, and raised upon a ledge of rock, jutting into the Irawadi, is a small elephant paddock, a single square palisade without gates. On the side of the mount, under a little pavilion, sat the king, personally directing the ceremony which Mr. Crawfurd so ably describes. A banana-tree had been planted in the middle of the paddock. It was removed with great observance; and on the spot where it had been standing, five persons, advanced in age, came forward with solemn strut and dance, bearing branches of a species of *Eugenia*, or Jambu, and carrying offerings of rice and sweatmeats to the Nat. The exact words of the incantation Mr. Crawfurd could not learn; but the substance of it was an information to the demi-god, that a glorious prince, the descendant of a line of kings, presided; that the demi-god was therefore requested to be propitious—to lend his aid in getting the elephants quietly into the pen, and generally throughout the ceremony. Then some two-and-thirty female elephants, with their young, were driven into the enclosure; four males followed, and their riders were provided with long ropes having a noose at the end. Their object was to entangle the young elephants about to be weaned by the hind leg; and they did not succeed without great difficulty, for the weanee, as a lawyer might term him, was protected by the herd of elephant matrons, who made common cause for the protection of the persecuted youngling. When he was at last secured, no wild elephant just caught could have been more outrageous and obstreperous. The huge mounted elephants had to ply their trunks and beat the neophyte frequently, and Mr. Crawfurd observed, once or twice, that they raised the terrified recusant quite off the ground with their tusks, without doing him any material injury. When thus lifted up, the cry of the patient differed in no way, but in degree, from the scream of a hog in pain or fear. Ultimately, the young proboscidian, consigned to dry nursing and tuition, was shut into a small pen, where he was under the surveillance of two male elephants, who continued to watch him. Mr. Crawfurd appears to have left him still very outrageous, and making violent efforts to extricate himself to very little purpose.*

Pringle, in the narrative of his encountering the huge African elephant, which we have already noticed, gives a lively account of the natural habits of that species, from personal observation. He was riding with his party, and while they ascended the Winterberg, the grand aspect of which, with its coronet of rocks, frowning front, and steep, grassy skirts, feathered over with a straggling

* Embassy to Ava.

forest, partly scathed by fire, he well describes, he constructed a sort of booth or shieling, for their shelter at night, on the edge of a wood in a lovely verdant glen at the foot of the mountain, all alive with the garrulity of monkeys and parrakeets. Lions were numerous in the vicinity, and they protected themselves by a blazing watch-fire, and a couple of sentinels during the night; but no disturbance interrupted their repose.

Next day they followed the course of the Koonap, over green sloping hills, till the ruggedness of the ravines, and prevalence of jungle, compelled them to follow a Caffre path, kept open only by the passage of wild animals along the margin of the river. Herds of quaggas, and various antelopes were seen during the forenoon; but, after mid-day, they came upon the recent traces of a troop of elephants.

"Their huge foot-prints were everywhere visible; and in the swampy spots on the banks of the river, it was evident that some of them had been luxuriously enjoying themselves, by rolling their unwieldy bulks in the ooze and mud. But it was in the groves and jungles that they had left the most striking proofs of their recent presence and peculiar habits. In many places paths had been trodden through the midst of dense forests, otherwise impenetrable. They appeared to have opened up these paths with great judgment, always taking the best and shortest cut to the next savannah, or ford of the river; and in this way their labours were of the greatest use to us by pioneering our route through a most intricate country, never yet traversed by a wheel-carriage, and great part of it, indeed, not easily accessible even on horseback. In such places, the great bull elephant always marches in the van, bursting through the jungle as a bullock would through a field of hops, treading down the brushwood, and breaking off with his proboscis the longer branches that obstruct the passage, whilst the females and younger part of the herd follow in his wake."

This observing painter with the pen, then proceeds to describe the traces of the operations of these huge animals among the mimosa-trees, sprinkled over the meadows, or lower bottoms. Great numbers of these trees had been torn from the ground and placed in an inverted position, so that the elephants might browse at their ease upon the succulent roots. Many of these trees were of considerable size, and in such cases, the elephant had brought one of his tusks to bear, as a man would use a crow-bar, digging it under their roots to loosen their hold, before he had attempted to wrench up the tree with its trunk.

While the party were admiring these and other tokens of the elephant's strength and sagacity, they suddenly found themselves,

on issuing from a woody defile, in the midst of a numerous herd. None of the elephants, indeed, were very close to them, but were scattered in groups over the bottom and sides of a valley, two or three miles in length. Some were browsing on the juicy spek-boom, with which the skirts of the hills on each side were fringed; others were busy among the young mimosas and evergreens with which the meadows were sprinkled. As the party cautiously proceeded, some of the groups came more distinctly into view. These, in many instances, appeared to be separate families, consisting of the male, female, and young of different sizes. The gigantic proportions of the chief leaders, and their calm and stately tranquillity of deportment became more and more striking, as the band of about a dozen horsemen, including Hottentots, advanced; but the elephants seemed either not to observe, or to disregard the march of the travellers down the valley. As they rode along leisurely through a meadow, thickly studded over with clumps of tall evergreens, they suddenly came upon the enormous male, which they conjectured to be at least fourteen feet high, right in their path, and within a hundred paces. The Hottentots, in their broken Dutch, whispered that he was *een gruwzaam karl—bania', bania' groot*, which, according to the interpretation of one of them, signifies a "hugeous terrible fellow, plenty, plenty big."

The great grewsome carle did not, however, seem to notice them; for the wind was brisk, and they stood to leeward of him, so that he was not warned by his senses of smelling and hearing. When, however, they turned off at a gallop, making a circuit through the bushes to avoid collision with him, he was startled by the sound of the horses' feet, and turned towards them menacingly, erecting his enormous ears, and raising his trunk as if about to charge. Fortunately for the party, however, he remained on the spot, looking after them, in front of two or three females, and as many young ones, which had hastily crowded up behind from the bank of the river, as if to claim his protection.

Such is the portrait of an elephant in a state of nature. How different is its bearing when it has become subjected to man, whose hand and head subdue all living things, however enormous, to his will. The greatest of terrestrial animals, conscious as it is of enormous strength, obeys all his behests for good or for evil; stalking, stately and huge in the solemn procession, proud of its gorgeous trappings; amusing him with unwieldy, but well-adjusted gambols, and clever tricks; or "barded from counter to tail," with steel-clad trunk and tusks armed with poisoned daggers, dealing destruction in war, and trampling down masses of men, as if they were no more than an army of locusts.

ELEPHANTS.

PART II.

"Let them show their features in war."
MACPHERSON.

THAT the obedient sagacity of an animal endowed with such enormous strength, should have led the strategist to employ the elephant as an agent, and that such agency should, at first, have been overwhelming, was to be expected.

In the early periods, the art of war was, in a great degree, reduced to a trial of physical strength, and victory, for the most part, was the reward of personal valour. The general, as well as the common soldier, fought hand to hand; and the effect of the first sight of a well-appointed troop of elephants, when opposed to ancient cavalry and infantry, may well have turned the tide of battle.

Although the triumphant Liber Pater is stated to have been the first to yoke those of India to his car, the ambushed elephants of King Amoræus that put to flight the horsemen of Cyrus in his expedition against the Derbices, appear to have been the earliest on record actually engaged. The ancient Indian monarchs, if we are to believe Pliny and others, numbered thousands of these living mountains among their standing armies; and the story told by Diodorus of the stratagem of the Assyrian Queen, when, weary of the want of excitement attendant upon a long peace, she languished again for conquest, shows in what consideration these animals were held as an arm of war. India was her object; but then what was to be done for elephants? Stabrobates, the king against whom her expedition was to be directed, possessed, besides his other almost countless forces, numbers of these huge animals, well accoutred for the field.

Semiramis, therefore, caused three hundred thousand black oxen to be slaughtered, and of the skins, sewn together and

stuffed with straw, her mechanics formed artificial elephants: there was a man to direct, and a camel to carry each of them, so that at a distance they might well pass for living beasts. The workmen laboured in a secret place, walled round and guarded, so that no hint of what was passing within should transpire; and when all was finished, the horses of her army were familiarised with the machines, as the knight reconciled his horse and dogs to the presence of the real Rhodian dragon, by teaching them to fight the artificial model. Her troops, which were assembled in Bactria, amounted, according to Ctesias, to three millions of infantry, two hundred thousand cavalry, a hundred thousand war-chariots, and a hundred thousand soldiers, armed with very long swords, mounted on camels. With these, the mock-elephants, and two thousand boats so contrived that they could be taken to pieces and reconstructed, and which were transported on the backs of camels, Semiramis took the field.

On his side, Stabrobates, who had heard of these warlike preparations, was not idle; he increased his army in every branch, and summoned all his resources to outdo Semiramis. And though he does not seem to have been in the secret of the stuffed machines, he augmented the number of his real elephants, and furnished them so completely with offensive and defensive armour, that it seemed impossible to resist them. He then sent ambassadors to the queen, upbraiding her with commencing an unprovoked war; wrote to her some rather strong epistles, in which he touched not very politely on her private habits, and finished by informing her that if he caught her, she should be crucified; whereat the queen smiled, proceeded to the Indus, where the king's fleet lay, sank a thousand of his vessels, and took a great number of captives. Stabrobates feigned a panic and fled; the feint took: Semiramis crossed the river and pursued the Indians with the whole of her forces, except eighty thousand men left to guard the bridge.

In her front Semiramis placed her artificial elephants; and when the amazed scouts carried to the king the news of the multitude of those beasts that protected her line, every one looked on his neighbour, and enquired in surprise, from what source the Assyrians could have been supplied with such numbers? Stabrobates now, in his turn, began to repent his retreat, and great must have been his comfort when the deserters—for they as usual brought the information—from the queen's army enlightened him as to the true state of the case.

Both were now confident, the queen still believing that the cheat was undiscovered, and both marched to the attack. The cavalry and chariots formed the Indian van, and the horses taking

the stuffed machines, which were placed before the Assyrian main body, at a distance, for real elephants, advanced boldly enough. As they came nearer, the scene was changed, the horses were no longer deluded, but found themselves opposed to monstrous shapes, the sight and smell of which were equally strange to them: they kicked, they plunged, they reared; some threw their riders, whilst others madly carried them among the enemy, who fell upon them, and drove them in confusion back upon their own main body.

Stabrobates was again surprised; but he brought up his infantry headed by his elephants, the king himself commanding in the right wing, mounted on a stately beast, and fiercely charged the queen, who was opposite to him. The poor made-up elephants behaved nobly, but soon gave way before the massive weight of the real war-brutes, who were not to be taken in by the shredded and patched appearance of their leathern opponents, and a miserable slaughter of the queen's troops ensued. The field was covered with the torn and trampled slain, the king's elephants hurling some high into the air with their trunks, goring, rending, and tossing others with their tusks, treading down whole ranks of men, and destroying all before them. The Assyrians could no longer stand before such frightful devastation, and their whole army fled with their queen, whose arm had been pierced by the Indian king's own arrow, and her shoulder by one of his darts: but the fleetness of her horse saved her life.

Long afterwards, we find elephants among the opponents of Alexander, who encountered them before he passed the Indus; for, at the battle of Gaugamela, or Arbela, as the field is usually termed, where the power of Darius fell before the irresistible Macedonian phalanx, all the elephants of the Persian appear to have been taken. As he marched on Susa, twelve elephants, brought from India by Darius, were among the magnificent gifts presented to Alexander by the governor of the province. His victorious army seized, on the bank of the Indus, some of these beasts from the affrighted natives, who fled at his approach.

The Indus passed, the conquerer marched unchecked till the broad and rapid Hydaspes crossed his path, and he beheld, on the opposite bank, Porus and all his host, presenting a wall of flesh and steel beyond its waves. Familiarised as the Greeks had been to the sight of the beasts, the prodigious size and enormous number of the Indian king's elephants, their horrible roarings, as, provoked by their keepers, they menaced the invaders, his multitudinous and well-appointed army, with the war-chariots and the horsemen thereof, made them pause. The sun rose and set again and again; and there stood the Macedonian and the Indian

gazing at each other across that wild water. There, too, stood the elephants on the watch: every stratagem of the wily Greek to effect a passage had hitherto been baffled, and to attempt it openly, in the face of those threatening living bulwarks, was to court destruction; for the danger apprehended was, that the horses, seized with terror as they neared the elephants, would wildly leap from the boats into the rolling river. Thus passed several days. At length the watch of the Indians was relaxed. The great Greek Captain made a diversion with a part of his army, that drew off the enemy, and the main body of the Macedonians crossed and stood safely on the ground so lately occupied by the elephants.

But there was yet a terrible struggle to be sustained. Porus had drawn up his army upon a firm and sandy plain, offering the best ground for the operations of his chariots and cavalry. In front stood the war-elephants, like towers, a hundred feet apart, to cover the infantry and paralyse the Grecian horse with fear. Other huge elephants bearing large wooden towers, full of armed men, flanked each wing. On the right and left the foot were protected by the horse, and the horse by the chariots in their front. The colossal Porus himself was borne upon an elephant towering far above the rest of his fellows.

Alexander gazed at this imposing and glorious array with stern delight. He burst out into a joyous exclamation, that he had at last before him a danger worthy of the greatness of his soul.

The signal was given. Onward rushed the long levelled pikes of the phalanx, whilst the rapid charges of the cavalry, and the incessant storm of arrows from the light-armed Thracian bowmen, added to the panic that began to spread among the Indians. Still the elephants stood firm, trampling down the infantry like grasshoppers, or seizing the armed Greeks in their trunks, and delivering them to the tender mercies of their governors. The day was waning, but not the battle, which was still doubtful, when the Macedonians saw that their only chance was to turn all their strength upon these huge and stubborn enemies. Then was the crashing axe driven deep into their enormous legs,—their trunks were lopped with scythe-like weapons,—and, while the infantry were thus at work upon them, the Greek cavalry surrounded them. The enraged, mutilated, and hemmed-in beasts dealt destruction to friend and foe, and, after a carnage to which modern battles offer scarcely any parallel, the wounded and wearied elephants which had not yet dropped, but had no longer strength to push against the masses that opposed them, first stood still, uttering hideous cries, and then staggered out of the fight.

Unmoved by this disastrous scene, the Indian king did not quail. His lofty stature and enormous elephant exposed him to the aim of all, but, covered as he was with wounds, he still darted his javelins at the enemy, till they dropped from his unnerved arm. Exhausted, he attempted to slide down from his elephant, and its governor perceiving the king's wish, commanded the beast to kneel. This was the finishing stroke; for, as all the elephants had been trained to imitate the movements of the king's, *they* knelt too, and became an easy prey.

In that collection of wonderful stories, got up in all probability for the entertainment of the Empress Julia, the life of Apollonius of Tyana, the Cappadocian seer of impossible sights is related to have found in an Indian town an elephant honoured by the inhabitants with perfumes and garlands, bearing a Greek inscription on the gold rings that adorned his tusks, purporting that Alexander, the son of Jupiter, had dedicated Ajax to the sun. The name of the elephant belonging to Porus, was said to be Ajax, and, according to this account, he had survived the defeat some three hundred and fifty years.

It may be doubted whether Alexander himself had, as one writer at least declares,* elephants among the effective forces of his army on the occasion of that victory. The better evidence leads to the conclusion that, with the shrewd sagacity of a great general, he despised them as incumbrances, and as likely to inflict at least as much injury on their friends as on their foes. Not that he did not take care to secure all the elephants that his success or the influence of his name might procure. He had his elephantarch, and appears to have been anxious to leave none of those animals to his enemies, either for pomp or war. His stud, which must have been very numerous, seems to have been divided amongst his successors, of whom he prophetically said that they would celebrate his obsequies with bloody hands.

In the first chapter of "The first booke of the Maccabees," in Barker's Bible,† we find the following record.

"1 After that Alexander the Macedonian, the sonne of Philip, went foorth of the land of Chettiim, and slew Darius King of the Persians and Medes, and reigned for him as he had before in Grecia.

2 Hee tooke great warres in hand, and wanne strong holds, and slew the kings of the earth.

3 So went hee thorow to the endes of the world, and tooke spoyles of many nations, insomuch that the world stood in awe of him: therefore his heart was puffed up and he was hautie.

* Polyænus, who places them in Alexander's left wing. † 1615.

4 Now when hee had gathered a mighty strong hoste,

5 And had reigned over regions, nations, and kingdomes, they became tributaries unto him.

6 After these things hee fell sicke, and knew that hee should die.

7 Then hee called for the chiefe of his servants, which had been brought up with him of children, and parted his kingdom among them, while he was yet alive.

8 So Alexander had reigned twelve yeeres when he died.

9 And his servants reigned every one in his roume.

10 And they all caused themselves to be crowned after his death, and so did their children after them many yeeres, and much wickednesse increased in the world."

Elephants were employed by those crowned servants and their descendants in the bloody wars that followed the partition of Alexander's kingdom. In the battle fought by Eumenes (who had possessed himself of the elephants of Porus) against Antigonus, those animals were arrayed in the armies of both. It would weary the reader to follow the history of these pachyderms as an arm of war during this sanguinary period; and through the details of their destruction by stratagem, the sword, and famine. Suffice it to allude to the attack of Polysperchon on Megalopolis, when his sixty-five elephants and the flower of his army miserably perished in spiked ditches strewed over with earth; and to the siege of Pydna by Cassander, the son of Antipater, which terminated in the massacre of Alexander's mother, wife, and son, who were there taken with the town, not before the besieged had suffered the most pinching pangs of hunger, and the elephants had been starved on saw-dust.

We must not, however, pass unnoticed the gallantry of Ptolemy, when Perdiccas attacked him upon the Nile, and with mounted elephants overthrew his fortifications. Seizing a long pike, Ptolemy manned the wall, pierced the eyes of the foremost elephant, wounded his Indian governor, and restored confidence to his soldiers, by whom the storming party were hurled into the river. Again when Ptolemy attacked Demetrius at Gaza, Seleucus and himself erected an iron, sharp-pointed palisade, strengthened with chains, as a barrier against the elephants of Demetrius. The enemy made a terrible onset with their beasts, thinking to conclude, at once, a doubtful battle, but they came to a sudden check at the palisade; and though forced by their gallant governors, who were terribly galled by the darts and arrows of Ptolemy's soldiers, on the spikes, the lacerated elephants were, after the death of most of their riders, taken, and the horse of Demetrius fled in consternation.

Notwithstanding these examples of successful resistance on his part, it seems to have occurred to Ptolemy that the personal

bravery of his troops might be materially aided by opposing the African elephant to his Indian relative. Forthwith he prohibited their slaughter by proclamation, and issued orders for their capture, not without effect, for we find his son Ptolemy Philadelphus in possession of three hundred. The son of Philadelphus considered himself indebted to them for his victories over the Syrian Antiochus Theus: but the fourth Ptolemy (Philopater) in his disastrous encounter with Antiochus the Great, had, if we are to believe Polybius, the mortification of witnessing the inferiority of the African to the Indian species in fight.

The description of the battle glows with the graphic power that distinguishes the Greek historian. When the advance was sounded, the elephants commenced the fray. Some of those belonging to Ptolemy boldly attacked their adversaries, and then might be seen the spearmen fighting hand to hand from the towers on their backs. Nor were the elephants themselves idle, affording a grand spectacle as front to front they furiously charged each other. With intertwisted trunks, each strove to maintain his position, and when, in the fierce struggle, the stronger turned the flank of his opponent, he gored him with his tusks, as fighting bulls pierce each other with their horns.

But the greater number of Ptolemy's elephants could not be brought up to the combat; and here, Polybius observes, that this is generally the case with African elephants, which, unable to bear either the odour or the cry of the Indian species, or, more probably, terrified by the great bulk and strength of the latter, frequently turn their backs and flee from the contest. And so it happened on this occasion. For the panic-struck African elephants fell back in disorder against the ranks of their own army, and broke the line of the royal guards. Then Antiochus, wheeling round the elephants, attacked the cavalry of Ptolemy's right wing, and, at the same time, the Greek mercenaries, who stood near the phalanx and within the elephants, charged and routed the Peltastæ, already disorganised by the African elephants, so that Ptolemy's whole left wing was driven from the field.

This was the Ptolemy, who, on his visit to Jerusalem, in revenge for the insult offered to him by the Jews, in forcibly preventing him from entering the temple, determined to extirpate them, and, as a commencement, ordered a vast number to be exposed to his elephants, and trodden under their feet. But the elephants, instead of trampling down the Jews, turned their rage against the Egyptians, who crowded to feast their eyes on this horrible scene—an unexpected event, which so struck Ptolemy, that he treated with more than ordinary consideration the nation that he had doomed.

In the apocryphal book already quoted, we find curious details

of the methods employed to marshal and excite the war-elephants of Antiochus. The tenth verse of the first chapter has been quoted. The eleventh proceeds thus:

"For out of these came the wicked roote, even Antiochus Epiphanes, the sonne of King Antiochus, which had been an hostage at Rome, and hee reigned in the hundredth and seven and thirtieth yeere of the kingdome of the Greekes."

In the thirtieth and subsequent verses of the sixth chapter of the same book it is recorded that,

"The number of his armie was an hundred thousand footemen, and twenty thousand horsemen, and two and thirtie elephants exercised in battell.

"These came through Idumea, and drewe neere to Beth-sura, and besieged it a long season, and made engines of warre: but they came out and burnt them with fire, and fought valiantly."

"Then departed Judas from the castle, and removed the hoste toward Beth-zacarias, over against the king's campe."

"So the king arose very early, and brought the armie and his power toward the way of Beth-zacarias, where the armie set themselves in aray to the battell. and blew the trumpets."

"And to provoke the elephants for to fight, they showed them the blood of grapes and mulberries."

"And they set the beastes according to the ranges: so that by every elephant there stood a thousand men armed with coates of male and helmets of brasse upon their heads, and unto every beast were ordained five hundreth horsemen of the beast."

"Which were ready at all times wheresoever the beast was: and whithersoever the beast went, they went also, and departed not from him."

"And upon them were strong towres of wood that covered every beast, which were fastened thereon with instruments, and upon every one was two and thirty men that fought in them, and the Indian that ruled him."

"They set also the remnant of the horsemen upon both the sides in two wings of the hoste, to stirre them up and to keepe them in the valleyes."

"And when the Sunne shonne upon the golden shields; the mountains glistened therewith, and gave light as lampes of fire."

"Thus part of the king's armie was spread upon the high mountaines and part beneath: so they marched forward warily, and in order."

"And all they that heard the noyse of their multitude, and the marching of the companie and the rattling of the harnesse, were astonished: for the army was very great and mighty."

All this pomp and circumstance, however, failed to daunt the valiant Jew and his brave companions:

"Then Judas and his host entred into the battell, and they slewe sixe hundreth men of the king's armie."

"Now when Eleazar the sonne of Abaron, saw one of the elephants armed with royall harnesse, and was more excellent than all the other beasts, he thought that the king should bee upon him."

"Wherefore he ieoparded himself to deliver his people and to get him a perpetual name,"

"And ranne boldly unto him through the middes of the hoste, slaying on the right hand and on the left, so that they departed away on both sides."

"So went hee to the elephant's feete, and gate him under him, and slew him, then fel the elephant downe upon him and there he died."

We must now change the scene to ancient Italy, where the Indian species was first opposed to the Roman soldier by Pyrrhus, who, as the ally of the Tarentines, came to assist them in their vain endeavour to stay the tide, that, rolling from the Tiber, was already overwhelming the neighbouring states. The first impression of the twenty elephants brought into the field by the king, did its work, and gave him a dearly-bought victory; but use lessens marvel, and every succeeding encounter dissipated the terror which this prodigious novelty had inspired, till the elephant had much the same effect upon the Roman line of battle as its sudden appearance produced upon Fabricius, who seems to have been no more moved by this attempt on his nerves by the king at Epirus, than he had previously been by the Grecian gold. Dentatus taught his soldiers to provide themselves with a blazing torch in one hand and a sharp sword in the other, and to rush at the huge beasts through the iron shower of arrows discharged from the towers on their backs. This mode of attack soon made them more formidable to the enemy than to their opponents. The maternal instinct of a female elephant on one of these occasions, contributed in no small degree to the success of the Romans, according to Eutropius; for a young one, smarting with its wounds, roared horribly in its anguish, and its mother, in her anxiety to hasten to its succour, broke through every obstacle in her way, and was followed by others, overturning all before them, and throwing the troops of Pyrrhus into irretrievable confusion. The result was the capture of four of these "Lucanian oxen," which were led to Rome in triumph. Nor was this the only disaster sustained by Pyrrhus from the employment of this dan-

gerous arm. At the siege of Argos, when every external barrier had been passed, and the besieging army were pressing into the town, the progress of the tower-bearing elephants was suddenly checked by the lowness of the gates, from which they crowded back upon the eager swarming assailants till all was disorder.

The Punic wars introduced the elephants of Africa to the Romans in much greater force than those of India had presented. In the first, the ill-fated consul took no less than eighteen in one battle, whilst his star was in the ascendant; but the Spartan general opposed to him, wielded this powerful arm with such skill, that Regulus, whose subsequent ungenerous and cruel murder will remain a blot upon the page that records it as long as history endures, was utterly defeated by the troops of Carthage. It was long before the legions recovered from the panic of that day; and the Carthaginians seeing the effect produced, transported numbers of these beasts across the sea to Sicily, where nearly a hundred and fifty towered before the beleagured Palermo. The incessant discharge of javelins directed against them by Metellus, was, however, irresistible. The elephants fled, carrying destruction and disorganisation in their terrified path; and the Romans, sallying forth, obtained a complete victory. More than a hundred elephants were among the spoils of the day; and it is no small proof of the power and mechanical ingenuity of the republic, that they were conveyed to Reggio on a monster-raft, covered with earth and floated upon empty casks. From Reggio they were conducted to Rome, there to feast the eyes of the ill-fed and worse-clothed populace, and pamper their pride with an incontrovertible sign of the prowess of the national arms.

Hitherto, the African elephant had only been seen at Rome as a triumphant exhibition; but the time was now at hand when the Roman was to behold him as an invader. What stronger instance can be adduced in proof of the indomitable energy of Hannibal than the passage of these animals with his host over the Pyrenees, the Alps, and the Apennines?

> —— Great was the tumult there,
> Deafening the din, when in barbaric pomp
> The Carthaginian on his march to Rome
> Entered their fastnesses. Trampling the snows
> The war-horse reared; and the towered elephant
> Upturned his trunk into the murky sky,
> Then tumbled headlong, swallowed up and lost,
> He and his rider.

And although the mountaineers fled at the approach of these huge animals, many must have perished among the icy precipices so utterly unfit to afford them sure footing. But, after all such

losses, sufficient numbers arrived safely in the plains of Italy, to support Hannibal's line of battle with striking effect, and to afford seasonable aid to his troops in their progress. Thus when he passed the Po, the elephants were so disposed as to act as a breakwater above the crossing army, and lessen the force of the current. The African species was led into battle by him and his brother Asdrubal with various success; but the period was at last come when Scipio was to carry the war into the country of the invaders.

The reinforcements necessary to fill the places of the numbers that were constantly falling in Italy (seven, for instance, died of starvation during their passage over the Apennines after the battle of Trebia, and the remnant, with the exception of the beast that carried Hannibal, were swept away, together with masses of men and horses, by the swollen Arno), together with the supplies demanded for keeping up the requisite force at home, drained Barbary of a great portion of these animals, which at that time must have been plentiful there. In vain did Mago, when he invaded Italy in requital of Scipio's descent upon Africa, present his frowning front of Elephants at Insubria. The Roman defeated the Carthaginian, and Hannibal found it necessary to follow Scipio, who was thundering at the gate of Zama. There, the eighty elephants that covered Hannibal's line spread devastation among the light-armed troops of the Roman; but Scipio dismounted his cavalry, and concentrating the whole power of his bowmen against the elephants, threw the galled and terrified beasts in confusion upon Hannibal's right wing, and terminated the second Punic war.

The Roman generals, relying upon the discipline and valour of their soldiery, had hitherto directed their energies to turning the elephants of their enemies against the troops on whose side the beasts were arrayed, and when they took those living pieces of artillery—for elephants seem to have been employed by the ancient for the same purposes, in some degree, as cannon in modern strategy—they merely kept them as trophies; but when the Punic wars were ended, and the Macedonian wars commenced, we find the elephants of Africa in the Roman ranks, and managed with such tact that they contributed largely to the reduction of Macedonia to the grade of a Roman province. The share attributed to these belligerents in the victories which led to that conclusion was, in fact, admitted and illustrated by the device of the last Macedonian king, who, for lack of living beasts, followed the example of Semiramis in the construction of artificial elephants, only that those of Perseus were made of wood, and each contained a trumpeter ready to imitate the animal's battle-cry.

Moreover, in the interval between the first and second Macedonian wars, African and Indian elephants were again opposed to each other, but the Roman's African beasts appear to have been very inferior to the Indian elephants of Antiochus. Scipio's quick eye saw this at a glance, and he ordered them into the rear. But if Antiochus had the superiority in this respect, he had not the sword before which, when wielded by Roman hands, both man and elephant went down. Only fifteen of the Syrian king's elephants survived the lost battle, and he was reduced to the same humiliating necessity which had been enforced in the case of the Carthaginians—the delivery to his European conquerors of those which he already possessed, and an undertaking never again to train elephants for war. His successor, however, seems to have got up a troop of them, for, as we have seen, he led thirty-two against Jerusalem.

Topsell, in his quaint language, gives an interesting summary of the use of the elephant as a military engine, and, as the book is scarce, the length of the extract may be forgiven:

"The king of India was woont to go to warre with 30,000 elephants of war, and beside these he had also followed him 3000 of the chiefest and strongest in India, which at his command would overthrow trees, houses, walles, or any such thing standing against him: and, indeed, upon these were the Indians wont to fight, for the defence of their coast and country. The farthest region of that continent is called Partalis inhabited by the Gangarides and Calingæ, the king whereof was wont to have seven hundred elephants to watch his army, and there was no meane prince in all India which was not lord of many elephants. The king of Palibotræ kept in stipend eight thousand every day, and, beyond his territory, was the king of Modubæ and Molindæ, which had four hundred elephants. These fight with men, and overthrowe all that come within their reach, both with trunke and teeth."

"There were certaine officers and guiders of these elephants, which were called *elephantarchæ*, who were the governors of sixteene elephants, and they which did institute and teach them martiall discipline were called *elephantagogi*. The military elephant did carry 4. persons on his bare backe, one fighting on the right hand, another fighting on the left hand, a third which stood fighting backward from the elephant's head, and a fourth in the middle of these holding the raines and guiding the beast to the descretion of the souldiers, even as the pilot in a ship guideth the sterne wherein was required an equall knowledge and dexterity, for they understand any language quickly, for when the Indian which ruled them said, strike heere on the right hand, or els on the left, or refraine and stand stil, no reasonable man could yeald

readier obedience. They did fasten by iron chaines, first of all, upon the elephant that was to beare ten, fiftcene, twenty, or thirty men on either side, two panniers of iron bound underneath their belly, and upon them the like paniers of wood hollow, wherein they place their men at armes, and covered them over with small boards, for the trunk of the elephant was covered with a maile for defence, and upon that a broad sword, and two cubits long: this (as also the wodden castle or paniers aforsaid) were fastened first to the necke, and then to the rumpe of the elephant. Being thus armed, they entered the battell, and they shewed unto the beast to make them more fierce, wine, red liquor made of rice, and white cloth, for at the sight of any of these, his courage and rage increaseth above all measure; then at the sound of the trumpet he beginneth with teeth to strike, teare, beate, spoyle, take up into the air, cast down againe, stamp upon men under feet, overthrow with his trunke, and make way for his riders to pierce with speare, shield and sword; so that his horrible voice, his wonderfull body, his terrible force, his admirable skill, his ready and inclinable obedience, and his straunge and seldome seene shape, produced in a maine battell no meane accidents and overturnes. For this cause we read how that Pyrrhus first of all produced elephants against the Romans in Lucania: afterward Asdruball in Affrica, Antiochus in the East, and Iugurtha in Numidia."

Let us now see how his opponents contended with this formidable adversary, and the wild sway of his trunk wielding a long and trenchant sword.

"Against these new kindes of castle-fighting and souldier-bearing beastes, on the contrary, they invented new kindes of stratagems, as is before sette downe, and also new instrumentes of warre, for a centuryon in Lucania with a new devised sharp sword, cutte off the trunke of this Beast: againe other invented, that two armed horsses should draw a charriot, and in the same armed men with Iavelins and sharpe speares, the speedy Horsses should with all force run upon the elephants, and the speare-men directing their course and weapons some upon the beast, other upon the riders, did not onely wound the beast, but also by celerity of the horses, escape all danger."

In Potter's "Archæologia Græcia"* there is an engraving of an armed elephant and a war-chariot. The front of the head of the elephant is protected by scale-armour, and from the centre of the forehead projects a sharp spike. The forepart of his trunk is defended with jointed plate armour. On his neck sits a governor

* 8vo. London, 1706.

holding the reins for his guidance in the right hand and a long spear in the other. On his back is a wooden tower, in the top of which are seen two men in the act of casting javelins, and two archers with their arrows drawn up to the heads. To the chariot are harnessed two horses covered with scale armour, excepting their crests, which are surmounted with plates of steel. From the pole two long spears project, and from a cross-piece behind the horses and made fast to the front of the car proceed scythes (two on each side). Scythes also project from the naves of the four wheels. The horses are guided by a man armed with two javelins, and behind him sits a warrior with his bow bent, as in the act of discharging his arrow. But to return to Topsell:

"Other againe sent against him armed souldiers, having their armour made full of sharpe prickes or piercing piked Nayles" [as Moore, of Moore-hall, went forth to fight the dragon of Wantley] "so that when the beast did strike at them with his trunke, he received grievous woundes by his own blowes. Againe there were certaine young men souldiers, armed with light armour, which being mounted uppon swift horsses, could cast darts with singular facility, and without the reach of the beast, many times wounding him with long speares, and so by example of the horse-men, the footemen grew more bold, and with piles in the earth annoyed the belly of the Beast, and utterly vanquishing it and the rider. Againe, they devised slings to cast stones, whereby they beate off the riders, and many times overthrewe the castle-bearer, as it were by some violent stroke of a cannon-shot; neither was there any more easie way to disaster these monster-seeming soldiers, then by casting of stones, and lastly they would suffer their elephants and their riders by poore hopes and appearances of feare, to enter into the middest among them, and so begirte and inclose them, that they tooke the elephants alive; and also more shooters of Darts carried in chariots with the strong course of horsses, did so annoy them, that whereas their bodies were great and unweldy, not nimble to stir out of place, it became more easie to kill an elephant than a Horsse, because many shooters at one time could pierce so faire a marke with unresistable weapons. And these things are related by Vegetius."*

And here we may close our sketch of the use made of the elephant in ancient warfare; for although it is clear that Julius had elephants in his armies, he seems to have held them in the same estimation that Alexander did. The enormous armed beast came, it is true, effectively upon the battle-scene when the object was to terrify antagonists unaccustomed to such a sight. One of

* The Historie of Foure-footed Beastes.

Cæsar's victories over the Gauls has been ascribed to a single war-elephant, and it is affirmed that he brought one to Britain, a fact, by the way, unnoticed in his own commentaries. Milton, however, adopts the statement of Dion, that Claudius employed armed elephants as antagonists to the valour of the naked Briton.

In our next chapter we shall endeavour to present the elephant as he was exhibited in ancient processions and shows.

ELEPHANTS.

PART. III.

Th' unwieldy elephant
To make them mirth us'd all his might, and wreath'd
His lithe proboscis.

PARADISE LOST.

"THE pictures of the nine worthies," writes Sir Thomas Brown in his "Pseudodoxia Epedemica," are "not unquestionable, and to critical speculators may seem to contain sundry impropriëties. Some will inquire why Alexander the Great is described upon an elephant; for we do not find he used that animal in his armies, much less in his own person: but his horse is famous in history, and its name alive to this day. Besides, he fought but one remarkable battel wherein there were any elephants, and that was with Porus, King of India, in which, notwithstanding, as Curtius, Arrianus, and Plutarch report, he was on horseback himself. And if because he fought against elephants he is with propriety set upon their backs, with no less greater reason is the same description agreeable unto Judas Maccabeus, as may be observed from the history of the Maccabees, and also unto Julius Cæsar, whose triumph was honoured with captive elephants, as may be observed in the order thereof, set forth by *Jacobus Laurus*."

The strictures of the learned and astute 'Dr. of Physick" seem to have run on this occasion, so entirely in what may perhaps be termed the matter-of-fact vein, that he appears to have lost sight of the allegorical style generally adopted in ancient pictorial and sculptured representations. There is not a cabinet of rare coins that does not afford pregnant evidence of this custom, to which we shall, hereafter, have occasion to refer. But some sages are

nothing if not critical, and in the same spirit those who flourish in the year 3000 may be treated with a discussion upon the disputed point whether her most gracious majesty Queen Victoria walked about London, Una-like, with a lion, as represented on the reverse of the splendid five-pound piece, or whether Sir Benjamin Brodie had in his house an altar dedicated to Æsculapius, with a ministering priestess of the first order of fine forms, such as is imperishably stamped on one of the most beautiful medals of ancient or modern times.

The year 3000! Where will the principalities of Europe be then? Will the wave of empire have rolled westward, following that law which hitherto seems to have ruled it? Will civilization be still advancing with rapid current, or be at its height, or on the ebb? Will some catastrophe, like the burning of the Alexandrian library, have swept away the lore treasured up for ages, leaving men again to begin at the beginning in science and art? The last of these questions alone can be answered peremptorily in the negative. The diffusive magic of Gutenberg, Faust, and Schoeffer called up inextinguishable light, and secured immortality to the thoughts and inventions of men. The printing-press forbids retrogression, and the streams of knowledge which it pours forth must continue to flow with increased power and fullness, till time is lost in the eternity of which the elephant was the emblem.*

The triumphant entry of Alexander into Babylon was not improbably rendered more imposing by the introduction of elephants. Such striking accessories are not likely to have been omitted in that grand scene of oriental pomp; but Quintus Curtius does not mention their presence among the lions, leopards, and other beasts driven and led along the flower-strewed roads, which were dressed with silver altars perfuming the air with frankincense, in honour of the hero whose chariot was preceded by the Magi and Chaldeans chanting hymns in his praise, as he passed in all the flush of manhood and conquest, to a premature death not without suspicion of poison. Vanity of vanities! At the age of thirty-two

* Thus on the reverse of a large brass medal of the Emperor Philip we find AETERNITAS AUGG. (*Æternitas Augustorum*) and "A caparisoned elephant, with a naked rider, who holds a goad in each hand, and sits on the animal's back, a less usual berth than the neck and shoulders. This was one of the collection of beasts which Gordian had prepared for his triumph, but which became an organ of his destroyer's popularity and fame; for there can be no doubt that the medal was struck on the occasion of the secular games, though the legend merely augurs the length of Philip's reign, of which the longevity of the elephant was deemed typical."—SMYTH.

he had conquered all before him, was worshipped as a God, and then,

> —— two paces of the vilest earth
> Was room enough.

The elephants of Pyrrhus were the first that appeared in a Roman triumph; and, from that period to the decline of the empire they were, at each successive series of victories, paraded through the thronged streets the outward and visible signs of extended and extending domination. In Scipio's procession, the elephants that marched to the capitol after the sacrificial victims, brought home the humiliation of Africa to the bosom of every artizan. On the last night of Cæsar's triumph these massive animals bore in their trunks immense torches. The most graceful of our poets thus brings before us the splendid but painful scene:

> Along the Sacred Way
> Hither the Triumph came, and winding round
> With acclamation and the martial clang
> Of instruments, and cars laden with spoil,
> Stopt at the sacred stair that then appeared,
> Then thro' the darkness broke, ample, star-bright,
> As tho' it led to heaven. 'Twas night; but now
> A thousand torches, turning night to day,
> Blazed, and the victor, springing from his seat,
> Went up, and kneeling as in fervent prayer,
> Entered the Capitol. But what are they
> Who at the foot withdraw, a mournful train
> In fetters? And who, yet incredulous,
> Now gazing wildly round, now on his sons,
> On those so young, well-pleased with all they see,
> Staggers along, the last?—They are the fallen,
> Those who were spared to grace the chariot wheels;
> And there they parted, where the road divides,
> The victor and the vanquished—there withdrew;
> He to the festal board, and they to die.

According to Suetonius, Julius, as he passed the Velabrum, was nearly *thrown out* of his chariot by the breaking of the axle-tree, and ascended the steps of the capitol lighted by forty elephants* bearing torches on the right hand and on the left. Dio says that Cæsar made the ascent on his knees, and seems to intimate that it was not during the Gallic, but the African triumph that he returned home, accompanied by nearly the whole of the

* Some make the number four hundred. Thus "Topsell—"Being thus tamed, they grow into civill and familiar uses, for Cæsar ascended into the capitall betwixt four hundred elephants, carrying at either side burning torches."

populace and a multitude of those enormous four-footed *Lychnophori*. It appears certain, at all events, that on the last-named occasion the elephants figured pre-eminently, and the spoils were displayed on ivory cars.

Much stress is not to be laid upon the medals which represent Cæsar and others riding in chariots drawn by elephants, for many of these were merely emblematical. Dignity, as well as eternity, and the conquest of the country to which it belonged, were typified by the beast. Doubts have been expressed whether the medal of Alexander, with his head on the obverse, and himself in a car drawn by four elephants on the reverse, was of his own time, although of ancient date; but it is generally considered that the reverse presents him in triumph after his Persian conquests. At Rome, it does not appear to have been unusual to open the public games with car-borne statues drawn by elephants. Thus was the image of Augustus carried in procession after his death, and its arrival at the circus was the signal for the commencement of the sports, as is recorded by a medal whereon the *Divus Augustus* is so portrayed, his head surrounded with rays. The Quirinal games were probably opened in like manner; for an ancient bas-relief represents Romulus, as is generally supposed, drawn by four of these animals.

Pompey, it seems, was the first who actually harnessed elephants to his car, intending thus to mortify those whose jealousy envied him his triumph. The mortification, however, recoiled upon himself; for the gate was too narrow for his ambitious attempt, and the chagrined victor was compelled to content himself with horses.*

This failure had its effect, and it was not till long after, and when the Romans had turned their irresistible arms against Persia, that the conqueror appeared in the triumphal procession drawn by elephants. The surpassing grandeur of these pomps can hardly be conceived, and the English reader who would form any idea of their splendour may turn to Gibbon's dazzling description of the

* The following is Holland's version of Pliny's account: "The first time that ever they were knowne to drawe at Rome, was in the triumph of Pompey the Great after he had subdued Africke, for then were two of them put in geeres to his triumphant chariot. But long before that it is said that Father Bacchus having conquered India did the like when he triumphed for his conquest. Howbeit in that triumph of Pompey, Procilius affirmeth, that, coupled as they were, two in one yoke, they could not possibly go in at the gates of Rome." Pliny's words are, "Romæ juncti primum subiere currum Pompeii magni Africano triumpho: quod prius India victa triumphante Libero patre memoratur. Procilius negat potuisse Pompeii triumpho junctos ingredi portam."—*Nat. Hist.* viii. 2. Plutarch states that Pompey resolved to have his chariot drawn by *four* elephants on this occasion.

triumph of Aurelian after the fall of Palmyra, when the beautiful Queen of the East, fettered with gold, and almost fainting under the intolerable weight of jewels, "preceded on foot the magnificent chariot in which she once hoped to enter the gates of Rome." This procession was opened by twenty elephants, four royal tigers, above two hundred of the most curious animals of all climates, and sixteen hundred gladiators.

But it was in the theatres that the most extraordinary feats of elephants were exhibited to the Romans. The prodigal luxury of these buildings, and the waste of life that steamed up for the excitement of a people requiring the stimulus of blood to arouse their jaded attention, would be incredible if the most satisfactory evidence did not place the startling accounts of wholesale slaughter beyond doubt. The gladiator was sworn to the faithful performance of his deadly duty, to do or to suffer as his master might command; to his service he bound himself, body and soul, and bright but pitiless eyes were among the thousands that looked down upon him as he fearlessly pronounced his hopeless *morituri vos saluto.*

Some notion of the lavish expenditure with which wealthy Romans purchased the transient favours of the multitude may be formed from the account of the structures raised by two candidates for popular applause.

Speaking of the theatre of Marcus Scaurus, Jonston, in his "Constancy of Nature,"* says, "That was a temporary work, and the use thereof was to be scarce for one moneth, yet it had three floors, in which there were 360 marble pillars. The lowest part of the theatre was all of marble, the middle was of glasse, and the uppermost was guilded: the inferiour pillars were fourty foot long, and between them were 3000 brazen statues. The whole theatre was so capacious that it would contain 80,000 men."

Curio caused two theatres to be framed of timber, "and these exceeding big, howbeit so as they might bee turned about as a man would have them, approach neere one to the other, or be removed farther asunder as one would desire, and all by the means of one hooke apiece that they hung by, which bare the weight of the whole frame, the counterpoise was so even, and all the whole therfore sure and firme."

"Now he ordered the matter thus; that to behold the severall stage plaies and shews in the forenoone before dinner, they shall be set back to back, to the end that the stages should not trouble one another: and when the people had taken their pleasure that

* 12mo. 1657.

way, he turned the theatres about in a trice against the afternoone, that they affronted one another: and toward the latter end of the day, and, namely, when the fencers and sword-plaiers were to come in place, he brought both the theatres nearer together (and yet every man sat stil and kept his place, according to his rank and order), insomuch as by the meeting of the hornes and corners of them both together in compasse, he made a fair round Amphitheatre of it: and there in the middest between, he exhibited indeed unto them all jointly, a sight and spectacle of sword-fencers fighting at sharpe, whom he had hired for that purpose: but in truth, a man may say more truly, that he carried the whole people of Rome round about at his pleasure, bound sure enough for stirring or remooving. Now let us come to the point, and consider a little better of this thing. What should a man wonder at most therein, the deviser or the devise itselfe? The workeman of this fabricke, or the maister that set him on worke? Whether of the twaine is more admirable, either the venterous head of him that devised it, or the bold heart of him that undertooke it? to command such a thing to be done, or to obey and yeeld to goe in hand with it? But when we have said all that we can, the follie of the blind and bold people of Rome went beyond al; who trusted such a ticklish frame, and durst sit there in a seat so moveable. Loe where a man might have seen the bodie of that people, which is commander and ruler of the whole earth, the conqueror of the world, the disposer of kingdomes and realms at their pleasure, the deviser of countries and nations at their wil, the giver of lawes to forreinstates, the vicegerent of the immortall gods under heaven, and representing their image unto all mankind: hanging in the air within a frame, at the mercy of one only hook, and readie to clap hands at their own danger."*

Of some of the permanent theatres and amphitheatres we have in our own day the remains, attesting the gigantic scale on which those national edifices were erected.

Jonston, in the book above quoted, after stating that "Caracalla also, wheresoever he did or purposed to stay in winter, caused amphitheatres and playhouses to be builded and suddenly they were to be demolished," thus continues: "Amongst those that lasted, it shall suffice me to make mention onely of the Theatre of Titus. A man could hardly see to the top of it, and a whole river of wealth was spent in the building of it, wherefore Martial writes,

> Cæsar's amphitheater hath the name.
> Let all give place, this doth deserve the fame.

* Holland's Pliny.

And though such stately structures consumed infinite wealth, yet if we regard the furniture, and such things as were employed besides, we shall finde that the cost they were at, would have served for great Cities. And that the magistrate did prodigally wast in Theatres, Playes, Wrestlers, Fencers, and such kindes of men all their patrimony, that they might win the peoples liking for an howers time. In a word; The workmanship was more than the matter. Nero, to show his wealth to Thiridates King of Armenia, covered all the theatre with gold, and the very hangings that hung up were of purple, and bossed with golden stars,* whence that was called a Golden day, and Lucretius alludes unto it.

> Yellow and Golden Hangings commonly,
> And murry coloured in the theatres
> Hung, twinkling like to stars within the sky.

Also Caligula, when he set forth some principall sports, He commanded that the floore round about should be made with minium and chrysocolla; Probus commanded to let loose at once 1000 Ostriches, 1000 Stags, as many Bears, 1000 Dogs, with wild goats and many other beasts, and at these sports he gave them to the people by way of Magnificence, and it was free for every one to kill as many as he could: And to add to this, the next day he caused to be shewed openly a 100 he Lyons, a 100 Leopards of Africa, as many of Syria, a 100 she Lions, and 300 Bears. And Titus, who though he were called the delights of mankinde, did the like.

> All kindes of beasts, that on the Mountains be,
> Cæsar, thy Theatre affords to thee:
> The Rocks did creep, the woods did run, men guesse,
> Such was the wood of the Hesperides.

But Heliogabalus was the maddest man of them all: For it is reported of him that he made at these sports, his ships flote in Channels that ran with Wine. And Carinus was not far short of him."†

Amid all this splendour, troops of gladiators variously armed rushed to the conflict, under the direction of the *Lanista*. Here was the *Thrax* opposed to the *Myrmillo*, there the *Secutor* chasing the wily *Retiarius*, who fled, biding his time to throw his net over the head of his adversary and pierce the entangled wretch with his trident—with many other combatants all with distinctive

* The centre of the awning on this occasion displayed in embroidery Nero as the Sun guiding his chariot.

† Constancy of Nature.

names, some hotly engaged, others lying lifeless in their gore—the wounded appealing, with raised fingers, for mercy to the perfume-besprinkled spectators, and the victors staying their hands as they watched for the signal of life or death. Too frequently did the downward-pointing thumbs, tier above tier, remind the vanquished that they were

> Required
> To fall with grace, with dignity—to sink,
> While life was gushing, and the plaudits rang
> Faint and yet fainter on their failing ear,
> As models for the sculptor.

The Christian bravery of one man stopped this outpouring of life. Obeying the dictates of the religion of the heart, Telemachus descended into the arena to part the combatants, and suddenly checked the charge of the devoted swordsmen, braving the wrath of the assembled people and securing the abolition of these butcheries with his blood.* The excitement of the savage populace at the interruption of the sport was not to be controlled, and the martyr was overwhelmed with a shower of stones. But when their madness had passed away, the noble self-sacrifice of the Asiatic monk sank deep into their repentant hearts, and they submitted to the laws that forbad those sanguinary spectacles.

The *Bestiarius*, or beast-fighting gladiator, does not appear to have been employed at the exhibition of the elephants brought to Rome by Metellus. They seem to have been driven about the Circus by slaves, to familiarize the people with their appearance, and to destroy, by the humility with which the beasts submitted, the terror of their name; but Pompey exhibited them in a general fight with multitudes of lions and with armed men; and, in his second consulate, when they were matched against Getulians, one of the wounded elephants shewed his dexterous training by snatching the shields of his opponents, and whirling them into the air with his trunk in such a manner as to give them a rotatory motion in their ascent and descent. Here is Topsell's description of some of these encounters.

"At the last the fight with elephants turned into a publike game or pastime, both to see them fought withall by men, and also among themselves. When certaine prisoners of the Romans were taken by Anniball, he first constrained them to skirmish among themselves, and so slew one another except only one; and

* This heroic act was done during the games with which Honorius was celebrating the retreat of the Goths; and, in his time, the laws alluded to were framed.

he was by the like commaundement forced to fight with an elephant, but upon condition of liberty if he escaped alive: and thereupon joined combat and slew the elephant to the great griefe and amazement of all the Carthaginians; but going home, according to agreement, Anniball fearing that by this fact those great beasts would grow into contempt, sent certaine horsemen to kill him by the way."

"Their trunke or hand is most easie to be cut off; for so it happened in the ædility or temple office of Claudius, Antonius and Posthumus being consuls, and afterward in the Circus, when the Luculli were the commons officers. And when Pompey was consull the second time, there were 17. or 20. which at one time fought within the Circus, at the dedication of the Temple of Venus the Victoria, where the Getulians fought with them with speares and dartes; for their happened an admirable accident, one of the souldiers who having a hurt in his feete did creepe uppon his knees betwixt the legges of the elephants, and caste up the dartes over his head into the beastes belly, which fell downe round about him, to the great pleasure of the beholders, so that many of the elephants perished rather by Art then the strength of the Souldier. No less was the miracle of another slaine with one stroke, for a pile ran into his temples through his eie, and there stacke so fast, that it could not be pulled forth againe; which thing was afterward assayed by Iulius Cæsar, and in the third time of his consulship, there were twenty elephantes, which in the games fought with five men, and so many towers on their backes, bearing threescore men in every tower."*

They were also opposed to bulls; and Martial, in his nineteenth epigram † records the destruction of one by an elephant, the former having rashly come into contact with the latter, and fancying that the solid bulk of the elephant might be tossed with as much ease as the stuffed figures on which he had been exercising his horns.

Pliny in the quaint but striking dress in which "Philemon Holland, Doctor in Physicke," ‡ has presented him, thus relates in detail, their pugnacious deeds in the arena.

"Fenestalla writeth that the first sight of them in Rome, was exhibited in the grand Cirque, during the time that Claudius Pulcher was Ædile Curule, when M. Antonius and A. Posthumius were consuls: in the 650 yere after the citie of Rome was built. In like manner, 20 yeres after, when the Luculli were Ædiles Curule, there was represented a combat between Bulls and Elephants. Also in the second consulship of C. Pompeius at the

* Historie of Foure-footed Beasts. † Spectaculorum Liber.
‡ Folio, 1601.

dedication of the temple to Venus Victoresse, 20 of them, or as some write, 17 fought in the grand Cirque. In which solemnitie the Gætulians were set to launce darts and javelins against them. But among all the rest, one elephant did wonders: for when his legs and feet were shot and stucke full of darts, he crept upon his knees, and never staid till he was gotten among the companies of the said Gætulians, where he caught from them their targets and bucklers perforce, flung them aloft into the aire, which as they fell turned round, as if they had bin trundled by art, and not hurled and thrown with violence by the beasts in their furious anger: and this made a goodly sight and did great pleasure to the beholders. And as strange a thing as that was seen in another of them, whose fortune was to be killed out of hand with one shot: for the dart was so driven that it entered under the eie, and pierced as far as to the vitall parts of the head, even the ventricles of the brain. Wherupon all the rest at once assaied to break forth and get away, not without a great hurry and trouble among the people, notwithstanding they were without the lists, and those set round with yron gates and bars. But those elephants of Pompey being past all hope of escaping and going cleere away, after a most pittifull manner and rufull plight that cannot be expressed, seemed to make mone unto the multitude, craving mercie and pittie, with grievous plaints and lamentations, bewailing their hard state and wofull case: in such sort that the peoples hearts earned at this piteous sight, and with teares in their eies, for very compassion, rose up all at once from beholding this pageant, without regard to the person of Pompey that great Generall and Commander, without respect of his magnificence and stately shew, of his munificence and liberality, where he thought to have woon great applause and honor at their hands; but in lieu thereof fell to cursing of him, and wishing all those plagues and misfortunes to light upon his head, which soon after insued accordingly. Moreover, Cæsar the Dictatour, in his third consulship, exhibited another fight of them, and brought forth twenty to maintain skirmish against five hundred footmen: and a second time he set out twenty more, with wooden turrets upon their backs, containing sixty defendants a piece: and he opposed against them five hundred footmen and as many horse. After all this, Claudius and Nero, the emperors, brought them forth, one by one, into single fight, with approved, expert, and accomplished fencers, at the end of al the other solemnitie when they had done their prizes."

Such touches of mercy as that above recorded, were, however, as few and far between as angels' visits; and, by a just retribution, the hard-eyed spectators were not always exempt from their share of the danger. The general rush of the elephants upon this

very occasion,—before whose overwhelming charge the iron balustrade must have been as a fence of reeds,—was made *non sine vexatione populi*; and, occasionally, that populace had to endure the tormenting caprice of a tyrant. Caligula, when the mortal game was reaching its most interesting and sanguinary point, and the heat was most intense, suddenly caused the awning to be drawn back, and forbade the sun-struck sufferers to leave their places.* Sometimes they were exposed to a more fatal burst of temper. Commodus, when hailed with divine honours by the acclamations of the people, assembled to behold one of his gladiatorial exhibitions in the arena, believing that they mocked him, issued orders in his fury for their instant slaughter.

Julius Cæsar, indeed, when, conqueror of the world, he returned to Rome, and forgave all who had been opposed to him in arms, at his grand exhibition of *Naumachiæ* as well as of battles between horse, foot, and elephants, caused the arena to be surrounded by ditches for the protection of the people from the infuriated beasts, to which they had been exposed in the games given by Pompey. The naval fights made this precaution the more necessary on account of the fear which the elephants were supposed to feel at the sight of water. Nets were also stretched to secure the spectators from the mad leaps of the leopards and lions. The prodi-

* In the earlier periods, the Romans sheltered themselves from the weather in the theatres as they could, wearing their broad-brimmed *causiæ* as a defence against the sun, and trusting to their hoods and mantles as a protection against the rain. "In processe of time, Lentulus Spinter (by report) was the first man that in the solemnity of the games and plaies Apollinate, drew fine curtaines over the great amphitheatre at Rome: howbeit, not long after, Cæsar Dictator caused the grand Forum or common place at Rome to be covered all over with such rich courtains; yea, and the high faire street called Sacra, to be hanged on both sides, from his own dwelling house to the very capitoll cliffe: which magnificent and sumptuous sight was more wondred at, and seene with greater admiration, than the brave shew and Tourney that he set out at the same time of sworde-plaiers at sharpe and to the utterance. Then followed Marcellus, also the son of Octavia, sister to the Emperour Augustus, who, in his own Ædileship and in the tenth consulship of his uncle Augustus beforesaid, upon the calends or first day of August in that yeare, caused the Romane Forum to be drawne all over and shadowed with the like courtains, although he represented at that time no solemnitie at all of games and plaies: and this he did only, that they who came to plead at the barre, might stand under shade more wholesomely. Lord, what a change was here at Rome since the daies of Cato the Censor. * * * Of late daies there were seene in the amphitheatres of Emperour Nero, traverses drawne upon cords and ropes, with fine courtains of blew azure colour like the skie, and those beset with stars; where the very floore of the ground under mens feet, was coloured red. But for all these paintings and rich dyes, yet when all is done, the white linnen held the own still, and was highly esteemed above all colors."—*Holland's Pliny.*

gality of the emperors had here room for display. Nero caused these nets to be knotted with amber; and in the time of Carinus they were made of gold, either in the form of cord or wire.

Thirty-two elephants, ten tigers, ten elks, sixty lions, thirty leopards, ten hyænas, one hippopotamus, ten cameleopards, multitudes of deer, goats, antelopes, and other beasts were turned into the arena at the Secular Games, celebrated by the Emperor Philip; and a murderous match of two thousand gladiators crowned the carnage. For three days and three nights were the games incessantly continued in honour of the thousandth anniversary of Rome. When the sun went down, innumerable torches scattered the darkness, till they, in their turn, paled before the dawn. But the measure of iniquity was full, and the end was at hand. The agonies of the followers of Him whose kingdom is not of this world, were no longer to make sport for the heathen. The Christian jubilees proclaimed peace and good will to men; and the arena ceased to be saturated with human blood.

Elephants were also employed by the ancients, as they have been in modern times, to execute criminals, but it appears that they were not always to be depended upon; "for when King Bochus had condemned thirty men to be torne and trod in pieces by elephants, and tying them hand and foote to blocks or pieces of wood, cast them among thirty elephants, his servants and officers could not by al their wit, skil, or provocation, make the beasts touch one of them: so that it was apparent they scorned and disdained to serve any man's cruell disposition, or to be the ministers of tyranny and murther."*

Dark as the picture presented by the exhibitions of the Roman theatre generally is, it had its brighter side, and elephants were not unfrequently presented as actors in genteel comedy, and as ballet-dancers. The training required for these performances, and other almost incredible feats, must have commenced when the animal was young; indeed, there is no doubt, notwithstanding the supposed impossibility of breeding the animals in confinement, so long cherished in modern times, that elephants were bred at Rome;† and as little that the ancients were well acquainted with the fact, so

* Topsell.

† In another chapter we have stated the rations of a modern elephant in captivity: here is an account of the diet of an ancient tame elephant. "When they are tamed they will eate barlie either whole or grounde: of whole at one time is given them nine Macedonian bushels, but of meal six, and of drinke eyther wine or water thirty Macedonian pintes at a time, that is fourteen gallons, but this is observed, that they drinke not wine except in warre, when they are to fight, but water at all times. Also they will eat dryed figges, grapes, onions, bulrushes, palmes, and ivy-leaves."—*Topsell.*

much disputed by Buffon and others, that the young elephant took its maternal nourishment with the mouth, and not with the trunk. The picture of a young elephant and its mother at Pompeii, demonstrates this knowledge.

But their genteel comedy? Six gentlemen-elephants, clad in the *toga*, accompanied as many lady guests of the same quality, dressed in the *stola*, to the banqueting-room, and there they went through the ceremonies of the *triclinium* after the most approved fashion. "There was a certain banquet prepared for elephants upon a low bed in a parlour, set with divers dishes and pots of wine, whereinto were admitted twelve, six males, apparelled like men, and six females, apparelled like women: when they saw it, they sat downe with great modesty, taking heere and there like discreet, temperat ghests, neither ravening upon one dish or other, and when they should drinke, they tooke the cup receiving the liquor very manerly, and for sport or festivity would, through their trunks, squirt or cast a litle of their drink upon their attendants."*

Their dances and feats of dexterous strength were no less admirable.

"In the late solemnity of tournois and sword-fight at the sharp which Germanicus Cæsar exhibited to gratify the people, the elephants were seen to show pastime with leaping and keeping a stir, as if they danced, after a rude and disorderly manner. A common thing it was among them to fling weapons and darts in the aire so strongly, that the winds had no power against them: to flourish also beforehand; yea, and to encounter and meet together in fight like sword-fencers; and to make good sport in a kinde of moriske dance. Some of them were so nimble and well practised, that they would enter into an hall or dining place where the tables were set full of guests, and passe among them so gently and daintily, weighing, as it were, their feet in their going, so as they would not hurt or touch any of the company as they were drinking."†

Their dancing at last was carried to a high pitch of refinement, for "they learned to daunce after pipes by measure, sometime dauncing softly, and sometime apace, and then again leaping upright, according to the number of the thing sung or played upon the instrument. Their was an elephant playing upon a cymball, and others of his fellowes dauncing about him, for there was fastened to either of both of his fore-legs one cymball, and another hanged to his trunke, the beast would observe just time, and

* Topsell. † Holland's Pliny.

strike upon one and then the other, to the admiration of all the beholders." *

But all the feats of ancient and modern times were eclipsed by those which now demand our notice. Madame Sacqui, when she ascended and descended the rope stretched from the gallery to the stage, over the upturned heads of the wondering and trembling pit, was hailed as the princess of funambulists. Afterwards, two performers descending from a height which reduced them to the size of fairies, excited, as they danced down the tight-rope amid the blaze of fireworks at Vauxhall, the fears and applause of half London. But when we contemplate an elephant, with all its instincts warning it not to venture its immense weight on any frail foundation,—an animal that cannot be tempted to pass a wooden bridge or tread a stage till it has satisfied itself of its sufficient strength,—in a similar situation, the fame of all biped rope-dancers fades before the nicely-adjusted skill of the gigantic quadruped. "One of the greatest wonders of them was, that they could mount up and clime against a rope; but more wonderfull that they should slide downe again with their heads downwards." † In Nero's time, at the celebration of the *Ludi maximi*, a distinguished Roman knight descended the rope, seated on an elephant ‡; and, at the Floral Games, Galba exhibited rope-dancing elephants.

The crowning exhibition of this sort is recorded by Pliny. Four elephants, advancing along ropes, bore, in litters, others personating that interesting situation in which the Roman ladies were wont to call upon Juno Lucina. §

The only modern feat at all comparable to this, was exhibited at the marriage of the King of France's brother, in the thirteenth century, when a man rode on horseback along a rope. Whether the horse was shod "with felt" does not appear.

* Topsell. † Holland's Pliny.

‡ "Ludis, quos pro æternitate imperii susceptos appellari *maximos* voluit, ex utroque ordine et sexu plerique ludicras partes sustinuerunt. Notissimus eques Romanus elephanto supersedens per catadromum decucurrit."—*Suetonius. Nero.*

§ "Per funes incessere, lecticis etiam ferentes quaterni singulos, puerperas imitantes."—*Pliny Nat. Hist.*, viii. 2. See further, the "Andria" of Terence.

ELEPHANTS.

PART IV.

"Who doubts that elephants are found
For science and for sense renown'd!
Borri records their strength of parts,
Extent of thought and skill in arts;
How they perform the law's decrees,
And save the state the hangman's fees;
And how by travel, understand
The language of another land.
Let those who question this report,
To Pliny's ancient page resort.
How learn'd was that sagacious breed!
Who now (like them) the Greek can read!"

THE ELEPHANT AND THE BOOKSELLER.

THE passage in Pliny alluded to by Gay in his caustic fable will be found in the third chapter of the eighth book of the ancient Italian's "Natural History," and is thus translated by Philemon Holland.

"Mutianus, a man who had in his time bin thrice consull, reporteth thus much of one of them, that he had learned to make the Greeke characters, and was wont to write in that language thus much, Thus have I written, and made an offering of the Celticke spoiles." *

This sentence is preceded by another in proof of their "docilitie."

"This is knowne for certaine, that upon a time there was an Elephant among the rest, not so good of capacity to take out his

* Mutianus ter consul auctor est, aliquem ex his et literarum ductus Græcarum didicisse, solitumque præscribere ejus linguæ verbis: "ipse ego hæc scripsi, et spolia Celtica dicavi."

lessons, and learn that which was taught him: and being beaten and beaten again for that blockish and dull head of his, was found studying and conning those feats in the night, which he had been learning in the day-time." The honest, industrious, hopeless dunce in Webster's charming picture of the "Dame's School" could do no more.

Old Topsell, commenting upon the passage in Pliny descriptive of the elephant's writing accomplishments, remarks:

"But in these actions of writing, the hand of the teacher must be also present to teach him how to frame the letters, and then as *Ælianus* sayeth they will write upon tables, and followe the true proportion of the characters expressed before their face, whereupon they looke as attentively as any grammarian."

Some people cannot bear to be outdone, and a worthy modern * has gone beyond the ancients, for he has endowed the elephant with speech. He tells us that at Cochin there was one that worked with human skill and dexterity. He had one day done a good day's work, in the course of which he had made more than ordinary exertions, and he was fatigued; when the governor of the port directed that he should assist in launching a vessel. To the astonishment of those who knew the willingness and docility of the good-natured beast, the governor's order was met by the most cool disregard on the part of the overwrought elephant. Caresses and threats were resorted to without the slightest effect, when the governor, as a last resource, elevating his voice, commanded him to execute the task in the name of the King of Portugal. This appeal to the elephant's loyalty was not made in vain. To the surprise and joy of the bystanders, he answered, "I will, I will!" and immediately applied himself to his task, which he performed to the satisfaction of all. Nor is this the only instance on record of the speechifying power of the elephant; though the other speeches are in the same laconic style.

There is, as usual, some foundation for these marvellous tales. Elephants, it is well known, manifest a perfect intelligence of the commands addressed to them by their keepers, and when called on, will answer to their names by uttering a shrill note, such as most of those who have visited menageries where they are kept, have heard. Here we shall probably find the key of the Cochin story; for one could hardly better express in writing this shrill note than by the word "*Hoo*," which, in the Malabar language, signifies, "I will."

And indeed such stories are so captivating, that we cease to wonder at those, who finding it much easier to believe than exa-

* Acosta.

mine, give a ready assent to every record of the sagacity of these stupendous creatures; but, after a somewhat extensive experience, founded on a long enquiry into the relative intelligence of animals, we are compelled to agree with Guvier that the intellect of the elephant does not surpass that of the dog. This conclusion, however, places the huge pachyderm in a very high grade; for no one can have studied the canine race closely without joining Sir Walter Scott in his declaration, that there was hardly anything that he would not believe of a dog. The heavy and imposing mass of the elephant's body, together with the certainty that the animal is conscious of the vast strength and crushing weight that he can, in a moment, bring to bear against an enemy; his *apparently* enormous brain-case, and dignified, sagacious aspect—his tremendous trunk-power, and infinitesimally delicate adjustment of it—all strike the spectator with awe. Then, he goes through his feats and tricks with such a grave face, that one is hardly surprised at hearing a spectator involuntarily exclaim, as he compares the brute with his keeper, "that the quadruped is the cleverer fellow of the two." And it is certain that when a sensible elephant and a shrewd keeper put their heads together, they are generally more than a match for an ordinary spectator, and sometimes too many for a learned philosopher.

Not a great many years since, one who held, and justly, a high rank among English physiologists, determined on sounding the depths and shallows of the elephant's organ of hearing. The philosopher had, no doubt, read the passages which we have quoted in a former chapter, illustrative of the ear which that animal has for music, and the advantage taken of it to make him both a dancer and musical performer. Accordingly he repaired to old Exeter Change, and there gave the elephant a morning concert. The organ pealed forth its full, rich notes; the grand piano sounded its measured marches, and rattled away its jigs. The elephant made no sign. Violins, violoncellos, double basses, horns, trumpets, were tried singly and in concert. The elephant was still impassible. At last a gong was struck, and the hitherto placid animal became all animation, rapturously trumpeting forth his shrill accompaniment. Away went the delighted philosopher, and enlightened a celebrated scientific society by an elaborate paper, in which an account was given of the various instruments played before the elephant, and his apathy till the gong was struck; with an *argal* to the effect following, *videlicet*, that the organ of hearing was so constituted in this huge creature, that it was only affected by the most sonorous of instruments.

This passed for a very sage deduction, till a sceptic thought he would go to the menagerie and ascertain whether his own experience accorded with that of the writer of the paper. He *did* go,

and was constant in his attendance for a week, when he found that the striking of the gong was the signal for feeding-time, and that the elephant's rapture was invariably shared by the whole ward of wild beasts—lions, tigers, bears, hyænas, jackals, monkeys, and all—who, to a quadruped and quadrumane, leaped up in the wildest excitement at the braying of their brazen dinner-bell.

That the elephant is a very "Fine-ear" in his auditory faculty there can be no doubt. A friend gifted with great acuteness of observation witnessed the following scene.

He went to see an elephant, accompanied by two ladies, and among other performances, the keeper—permission having been asked and obtained—told his monstrous charge to let him know the age of one of the ladies by scraping with his foot as many times as the lady had lived years. The elephant scraped one, two, three, and so on, till he stopped at twenty-eight: the lady was, in fact, under thirty. The keeper was then desired to tell the elephant to indicate the age of the other lady. The obedient creature scraped with his foot as before, and again stopped at twenty-eight.

"Look again," said the keeper.

The elephant surveyed the second lady, with a searching scrutiny, and recommenced his scraping; but he stopped, this time, at twenty-seven—and she was, in reality, about a year younger than her companion.

My friend, who had seen as many shows as the late Lord Stowell, avowed to me that he was puzzled, and entirely at a loss to discover how the feat was performed, although he had closely watched the man. Determined to give himself another chance, he requested the keeper to make the elephant repeat his answers.

The keeper, who forgot the conjuror's old maxim, "never show the same trick twice to the same party at the same time," complied; and the delusion was now detected. The keeper made the signal by giving the cane which he held in his hand, a succession of nicks with his thumb-nail, conformable to the number of scrapes that the elephant was to make with his foot.

In truth, the quickness with which a well-trained elephant will take a hint from his mohout is astonishing.

Bishop Heber mentions a horrible instance of this. Just before his arrival in India, one of these mohouts had been executed for revenging himself on a woman, who had said something to offend him, by means which he thought would be undiscovered. He made a sign to his beast, which, in obedience, instantly killed her. When Tavernier travelled with the Mogul's Mohammedan army, he was, at first, lost in astonishment at seeing the elephants as they marched along seize upon the idols that stood before the

pagodas and dash them to pieces, to the great distress and discomfiture of the Hindoos; but he soon found out the carefully-concealed truth. The mohouts, who seem to have been imbued with a spirit of intolerance worthy of modern bigots, made, as they passed, secret signals to their beasts to destroy the symbols of a mode of faith offensive to them.

This extreme docility is the result of memory and a power of combining ideas—of that condition of intellect, and exercise of its faculties, which, notwithstanding the logic of Descartes, Malebranche, and their disciples, induces the close observer and deep thinker to come to the conclusion that brutes are not mere machines, but are endowed with reasoning powers to a very considerable extent.

Nor is this a new doctrine. It may be traced in the writings of ancient as well as modern poets—in the works of the philosophers of old, of the Jewish Rabbis, and of the Christian Fathers. The notion of a *soul* includes, it is true, that of immortality—endless duration of existence: and the ancients interpreted the word as having a triple meaning or distinction. They considered it as indicating a spiritual, a sensitive, and a vegetative principle. According to them, man is possessed of a soul in all the three senses, and brutes in the two last; while plants have a vegetative soul only. When we read the beautiful lines of the "little Queen Anne's man—"

> Lo, the poor Indian! whose untutor'd mind
> Sees God in clouds, or hears him in the wind;
> His soul proud science never taught to stray
> Far as the Solar Walk or Milky Way;
> Yet simple Nature to his hope has giv'n,
> Behind the cloud-topp'd hill, an humbler heav'n
> Some safer world in depth of woods embrac'd,
> Some happier island in the wat'ry waste,
> Where slaves once more their native land behold,
> No fiends torment, no Christians thirst for gold.
> To be content's his natural desire;
> He asks no angel's wing, no seraph's fire;
> But thinks, admitted to that equal sky,
> His faithful dog shall bear him company—

we are carried back to the time of Augustus and the Elysian Fields, where the souls of the blessed were surrounded by those of their favourite animals, and revelled in the enjoyment of all that was pleasant to them in life—

> Stant terra defixæ hastæ, *passimque soluti*
> *Per campum pascuntur equi.* Quæ gratia currûm
> Armorumque fuit vivis, quæ cura nitentes
> Pascere equos, eadem sequitur tellure repostos

The unsophisticated Red man still looks forward to a heaven of bears and bisons; and the survivors are careful to place his bow and hunting implements beside him in his tomb.

It requires no great learning to show that the notion of the future existence of brute animals is not so novel as some may suppose. Manasseh, discoursing of the resurrection, lays it down that brutes will enjoy a much happier state of being than ever they enjoyed here, when men shall rise again; and Philo, in his treatise of "Future Rewards," asserts, without doubt, that ferocious beasts will be divested of their savage nature, and become tame and gentle. He expatiates eloquently on the harmony and love that shall be manifested when innocence shall reign in all the regions of restored nature, when the whole race of scorpions, serpents, and poisonous insects and reptiles in general shall become harmless, and have no power to afflict the blessed with their venomous weapons. Tertullian, not improbably, had this passage in his mind when, commenting upon the words of St. Paul,* he declares that there shall be an end of death, when the Devil, its chief master, shall go away into the fire which God has prepared for him and his angels:—when the sons of God shall be made manifest, and their manifestation shall release the world from the evil to which it is at present subject;—when the innocence and purity of nature shall be restored;—when beasts shall live in harmony with beasts, and infants shall play with serpents:—when the Father shall have subdued his enemies to his son, and put all things in subjection under his feet.

Every brute acts, doubtlessly, upon the impulse of an intelligent principle of its own, wisely and wonderfully adapted to its position upon the earth or in its waters. It has a power of distinction and comparison commensurate with the state of being to which it has pleased the Creator to call it, and, to a certain extent, is a free, though not, like man, a responsible agent.

Philosophers, such as those above alluded to, are compelled to allow that the actions of brutes express an understanding; but, in order to prove the position that those animals have no souls at all, say that it is only as everything else which is regular expresses it, such as a watch, a clock, or any other kind of machine; and they assert that this understanding is as distinct from the beast, as that which arranges the movements of a clock or watch is from those instruments. If this be so, they must consider the animal as insensible to all its natural operations. They must hold that it eats without pleasure, and is insensible to pain—that

* "And the creature itself shall be delivered from the bondage of corruption into the glorious liberty of the children of God."

it is, in short, a mere automaton. When we read such arguments as those which we have here noticed, tending to prove that a dog or an elephant is a mere animated parcel of matter, we are forcibly reminded of that beautiful passage in Scripture, "The stork in the heavens knoweth her appointed times, and the turtle, and the crane, and the swallow, know the times of their coming, but my people do not understand the judgments of their God."

This is a most pregnant subject, one on which we could dilate much; but, for the present, we must leave it to inquire into the degree of intellectuality that has been assigned to the massive quadruped which is the subject of this sketch.

As long as the elephant is under the direct guidance of man, there is no ground for wonder that even a child should lead him. It is when he is out of the reach of immediate human direction that the measure of his sagacity should be taken. Some of the anecdotes illustrative of his conduct when left to himself, may be accounted for from the influence of habit, as in the instances of elephants tying their own legs at night, or after swimming a river laden, unloading themselves in the most orderly manner on the opposite shore. But in the case recorded by M. d'Obsonville, there is something more.

Two elephants had been directed to knock down a wall by the direction of their cornacs, who had dismissed them to their task with their trunks guarded by leather, and with the usual promise of fruit and spirituous liquors if they performed it well. The elephants proceeded to their work, not singly, but, doubling up their guarded trunks, they combined their forces, and, swaying themselves in equal and measured time, these huge living battering-rams propelled their broad fronts against the building. As it shook under the repetition of their overpowering and uniform shocks, they watched the vacillating equilibrium of the tottering wall, and having made, at the precisely proper moment, one grand, simultaneous effort, suddenly drew back to avoid the tumbling ruins.

This may be "what we somewhat superciliously call instinct," to use the expressive language of the author of "Vathek," but it looks very like reason. Two men could not have wielded their instruments of destruction with more efficiency and discretion. In the case of these elephants the utmost possible advantage was taken of their own organization. The broad and massive forehead, expanded and fortified by the voluminous cellular sinus which separates the external from the internal table of the skull, the short compact neck, and the impulse of the well-balanced, overwhelming weight, were all brought to bear in the most effective manner. And here we may remark, that among quadrupeds,

the elephant has, proportionally, the shortest neck, the giraffe the longest neck, and that the *megaceros*, or great extinct Irish deer, had the stoutest neck, fit to bear the enormous spread of the gigantic antlers. In the camel and dromedary, the flexuous neck is peculiarly marked by the absence of the lateral foramina for the vertebral arteries. These peculiarities are well shewn in the grand group at the museum of the Royal College of Surgeons of England, of which the skeleton of Chunee, the Asiatic elephant, is the centre, flanked by those of the elk and giraffe on one side, and by those of the *megaceros* and dromedary on the other.*

It may be said, indeed, with reference to the unity of strength and purpose exhibited by the elephants in battering down the wall, that, in a state of nature, the necessity of removing or pulling down some great obstacle—a large tree for instance—would naturally induce the combination of two or more elephants to effect the removal, when it was discovered that the strength of one was inadequate to the task. But this observation, so far from weakening the case, strengthens it, by admitting spontaneous sagacious combination in the untutored beasts.

Then there are instances where single elephants left alone have acted according to the necessities of the case with the most remarkable intelligence. Take, for example, the story told by the author of "Twelve Years' Military Adventure," who declares that he had seen the wife of a mohout give a baby in charge to an elephant while she went on some business, and had observed the sagacity and care of the unwieldy nurse, to his great amusement. The babe, with the restlessness of childhood, began, as soon as it was left to itself, to crawl about, getting, in the course of its vagaries, sometimes under the huge legs of the animal, and at others becoming entangled among the branches of the trees on which he was feeding. On such occasions, the elephant would, in the most tender manner, disengage the child, either by lifting it out of the way with its trunk, or removing the impediments to its progress in the same manner. When the child had crawled so far as nearly to reach the limits of the elephant's range (for he was chained by the leg to a stump driven into the ground), he would protrude his trunk and lift the child back, as gently as possible, to the spot whence it had started.

No old woman could have tended her charge with more show of reason.

These will appear wonderful manifestations of intellect to such as have not been accustomed to observe the actions of animals:

* See the excellent "Catalogue" and "Synopsis" by the curator, Professor Owen, F.R.S., &c. &c.

but the ancients went far beyond anything stated in modern times; and not only endowed elephants with human passions, but gave them a high moral and religious character.

And first for their morality:—

"A certaine elephant seeing his Maister absent, and another man with his Mistresse, he went and slew them both. The like was done at Rome, where the elephant having slaine both the adulterer and adulteresse, he covered them with the bed-clothes untill his keeper returned home, and then by signes drew him into his lodging-place, where he uncovered the adulterers, and shewed him his bloody tooth that tooke revenge upon them both for such a villany: whereat the Maister wondering, was the more pacified because of the manifest-committed iniquity. And not only thus deale they against the woman, but they also spare not to revenge the adultery of men, yea, of their owne keeper: for there was a rich man, which had married a wife not very amiable or lovely, but like himselfe for wealth, riches, and possessions, which he having gained, first of all set his heart to love another, more fitting his lustfull fancye, and being desirous to marry her, strangled his rich il-favored wife, and buried her not farre from the elephant's stable, and so married with the other, and brought her home to his house: the elephant abhorring such detestable murther, brought the new-married wife to the place where the other was buried, and with his teeth digged up the ground and shewed her the naked bodye of her predecessor, intymating thereby unto her secretly, how unworthely she had married with a man, murtherer of his former wife."

Next for their piety:—

"They have also a kinde of religion, for they worshippe, reverence, and observe the course of the sunne, moone, and starres; for when the moone shineth, they goe to the waters wherein she is apparant, and when the sunne ariseth, they salute and reverence her face: and it is observed in Æthiopia, that when the moone is chaunged untill her prime and appearance, these beastes by a secret motion of nature, take boughes from of the trees they feede upon, and first of all lift them up to heaven, and then looke upon the moone, which they doe many times together; as it were in supplication to her. In like manner they reverence the sunne rysing, holding up their trunke or hand to heaven, in congratulation of her rising."

"Juba was woont to say, that this beast was acceptable to those Gods which ruled sea and land, bycause of their reverence to sunne and moone, and therefore *Ptolomeus Philopator* offered four elephants in a sacrifice (to recover the quietnesse of his mind),

thinking that the Gods would have been well pleased therewith, but finding that his fearfull dreames and visions departed not from him, but rather his disquietnesse increased, fearing that the Gods were angry with him for that action, he made four elephants of brasse, and dedicated them to the sun, that so by this deede he might purchase pardon for the former offence."

"This religion of theirs also appeareth before their death, for when they feele any mortall woundes, or other naturall signes of their later end, either they take up the dust, or else some greene herbe, and lift it up to heaven in token of their innocency and imploration of their own weakenes, and in like manner do they when they eate any herbe by natural instinct to cure their diseases: first they lift it up to the heavens (as it were to pray for a devine blessing upon it), and then devoure it."

"I cannot omit their care to bury and cover the dead carkases of their companions, or any other of their kind; for finding them dead they passe not by them till they have lamented their common misery, by casting dust and earth on them, and also greene boughes, in token of sacrifice, holding it execrable to doe otherwise; and they know by a naturall instinct some assured foretokens of their owne death. Besides, when they waxe old and unfit to gather their owne meate, or fight for themselves, the younger of them feed, nourish, and defend them, yea, they raise them out of ditches and trenches into which they are fallen, exempting them from all labour and perill, and interposing their own bodies for their protection: neither do they forsake them in sicknesse, or in their woundes, but stand to them, pulling darts out of their bodies, and helping both like skilfull chirurgians to cure their woundes, and also like faithfull friendes to supply their wants."

For these refined qualities Topsell quotes the authority of Pliny, Solinus, Ælian, Plutarch and Tzetzes.

Whatever may be thought of these ancient and somewhat marvellous records, we have modern accounts of the tender sympathy shown by elephants to their suffering brethren upon the most indubitable evidence. Bishop Heber, for instance, relates that an old starved elephant having fallen from weakness, another of very large size and in better condition, was brought to its assistance, and that he was much struck with the almost human expression of surprise, alarm, and perplexity in the countenance of the vigorous elephant as it approached its fallen companion. They fastened a chain round the neck and body of the sick beast, and urged the other in all ways, by encouragement and blows, to drag it up. The other pulled stoutly for a minute, but on the first groan given by

its wretched companion stopped short, turned fiercely round with a loud roar, and with trunk and fore-feet began to attempt to loosen the chain from its neck.

But to return to Topsell. As a proof of the susceptibility of elephants, and their proneness to the tender passion, take the following antique version of Beauty and the Beast.

"At the sight of a beautifull woman they leave off all rage, and grow meeke and gentle, and therefore Ælianus saith, that there was an elephant in Egypt which was in love with a woman that sold corrals; the selfe same woman was wooed by Aristophanes, and therefore it was not likely that she was chosen by the elephant without a singular admiration of hir beauty, wherein Aristophanes might say as never man could, that he had an elephant for his rivall, and this also did the elephant manifest unto the man, for on a day in the market he brought her certaine apples, and put them into her bosome, holding his trunke a great while therein. Another likewise loved a Syrian woman, with whose aspect he was suddenly taken, and in admiration of her face stroked the same with his trunke, with testification of farther love: the woman likewise failed not to frame for the elephant amorous devises with beads and corals, silver and such things as are gratefull to these brute beastes, so she enjoyed his labor and diligence to her great profit, and he hir love and kindnes without offence to his contentment, which caused Horat. to write this verse:

Quid tibi vis mulier nigris dignissima barris.

At last the woman died, whom the elephant missing, like a lover distracted betwixt love and sorrow, fell beside himselfe and so perished. Neither ought any man to marvel at such a passion in this beast, who hath such a memory as is attributed unto him, and understanding of his charge and busines as may appeare by manifold examples, for Antipater affirmeth that he saw an elephant that knewe againe and tooke acquaintance of his maister which had nourished him in his youth after many yeares absence."

And we have this further proof of their affectionate regard for their keepers:

"Their love and concord with all mankind is most notorious, especially to their keepers and women: for if through wrath they be incensed against their keepers, they kill them, and afterwarde by way of repentance, they consume themselves with mourning: and for the manifesting of this point Arrianus telleth a notable story of an Indian who had brought up from a foale a white elephant, both loving it and being beloved of it againe, he was thereupon carried with great admiration. The king hearing of this

white elephant, sent unto the man for it, requiring it to be given him for a present, whereat the man was much grieved, that another man should possesse that which he had so tenderly educated and loved, fitting him to his bowe and purposes, and therefore like a ryvall in his elephant's love, resolved to deny the king, and shift for himselfe in some other place: whereupon he fled into a desert region with his elephant, and the king understanding thereof, grew offended with him, sent messengers after him to take away the elephant, and withall to bring the man back againe, to receive punishment for his contempt."

"When they came to the place where he remained and began to take order for their apprehension, the man ascended into a steepe place, and there kept the king's messenger off from him by casting of stones, and so also did the beast like as one that had received some injury by them; at last they got neare the Indian and cast him down, but the elephant made upon them, killing some of them, and defending his maister and nourisher, put the residue to flight, and then taking up his maister with his trunke carried him safe into his lodging, which thing is worthy to be remembered as a noble understanding part both of a loving friend and faithfull servant."

"Generally, as is already said, they love all men after they be tamed, for if they meet a man erring out of his way they gently bring him into the right againe, yet being wilde are they afraide of the footsteps of men if they minde their treadings before they see their persons, and when they find an herbe that yeeldeth a suspition of man's presence, they smell thereunto one by one, and if al agree in one savour, the last beast lifteth uppe his voice and crieth out for a token and watchword to make them all flie away."

"Cicero affirmeth that they come so neare to a man's disposition, that their small company or nation seemeth to overgoe or equall most men in sence and understanding."

With which not very complimentary affirmation we close this chapter.

ELEPHANTS.

PART V.

"*Lucifer*— What thy world is, thou see'st,
But canst not comprehend the shadow of
That which it was.
"*Cain*— And those enormous creatures,
Phantoms inferior in intelligence
(At least so seeming) to the things we have pass'd,
Resembling somewhat the wild habitants
Of the deep woods of earth, the hugest which
Roar nightly in the forest, but ten-fold
In magnitude and terror; taller than
The cherub-guarded walls of Eden, with
Eyes flashing like the fiery swords which fence them,
And tusks projecting like the trees stripp'd of
Their bark and branches—what were they?
"*Lucifer*— That which
The Mammoth is in thy world;—but these lie
By myriads underneath its surface."

CAIN.

The ancients had a notion that the locality from which the elephants came had great influence on their temper and character. Thus we read that "The Kinge of the Indians was watched with foure-and-twenty elephants, who were taught to forbeare sleepe, and come in their turnes at certaine houres, and so were they most faithfull, carefull, and invincible. And as there be of them three kindes, the Palustrians or Marishye elephants are hair-brained and inconstant, the elephantes of the mountaines are subtill and evill-natured, lying in waite to destroy and devoure, but the campestriall elephants are meeke, gentle, docible, and apt to imitate men. In these is the understanding of their country

language, of obedience to princes, government, and offices; the love and pleasure of glory and praise: and also that which is not alway in men; namely, equity, wisdome, and probity."*

However fanciful this theory may be, there is no question as to the fact of difference of temper and character. Among elephants may be found as vicious brutes as ever walked on four legs or two either, and also as generous, noble-tempered animals as good men ever delighted to win to their will by kindness. When Bishop Heber was travelling in Oude, three elephants were in his train. One was described by his mohout as a fine-tempered beast, but the other two as great rascals. Between a good elephant and his attendants there seems to be the most perfect understanding. The man who walks by its side is talking to it all the time they are jogging on, and very often in a jargon which no one else can understand, but which is perfectly intelligible to the elephant. "My dove!" "Take care!" "Well done, my dear!" "My son!" "My wife!" If a fault is committed, "How could you do that?" if it is often repeated, "What can you be thinking of?" accompanied by a dig with the sharp iron hawkuss or ankush inflicted by the mohout.

I have seen many strong instances of the attachment of brutes to man; but I do not think I ever saw that feeling so strongly manifested as by a very young elephant that was brought to this country. Never was parent more fondly caressed by a child than was the keeper of this affectionate creature by his charge. If he absented himself even for a moment, the little elephant became restless; and if the absence was continued for a few minutes, its distress was quite painful to the spectator. After trying the different fastenings of its prison with its as yet weak proboscis, it would give vent to the most lamentable pipings, which only ceased when its friend and protector reappeared. And then how it would run to him, passing its infant trunk round his neck, his arm, his body, and lay its head upon his bosom. The poor man had a weary time of it; he was a close prisoner, nor was he released at night even; for he was obliged to sleep by the side of his nursling, which would have pined and died if left by itself.

But great as is the attachment of these animals to their keepers, and obedient as they are, generally, even to a tyrannical mohout, it is dangerous to try their tempers too far. "Of all the dumb beasts," quoth the learned Job Ludolphus, author of the "Ethiopic Lexicon," speaking of the elephant, "this creature certainly shares the most of human understanding: kind usage excites their ambition, contumely fires their revenge;" and doubtless the

* Topsell.

elephant will treasure up a wrong with human tenacity, and sometimes avenge himself as cruelly as Tiberius himself. Keepers who have needlessly mingled their caresses with blows have felt the fatal effects of their wanton conduct. Fancying that they have the animal entirely under their control, they become the dupes of his apparently submissive behaviour; but the injured animal bides his time, and, taking advantage of an unguarded moment, balances the accumulated account of wrong with the death of the wrong-doer. A terrible instance of this is recorded in one of Zoffany's pictures. When the Vizier—we cannot make up our pen to write Wezeer or Wuzeer, as, according to modern authorities, we ought—when the Vizier of Oude sent his embassy to meet Lord Cornwallis at Calcutta, there was among the elephants that carried the baggage, a male with a number of people on his back. This elephant, suddenly irritated by a violent and, as far as we know, an undeserved stroke with the penetrating hawkuss, snatched the unhappy driver from his seat, held him up in his trunk so as to render escape or aid impossible, and, after suspending him, as if in warning to others, for a few moments, during which the trembling victim must have endured the very extremity of agonising fear, deliberately dashed him to pieces. Not long ago, an unhappy English keeper was killed by the elephant placed under his charge: he had provoked the vengeance of the long-suffering creature by his persecutions, and paid the deadly penalty.

In the case recorded by Zoffany, the immediate aggression was, in all probability, the last drop that made the bitter cup overflow; for, unless the animal be naturally of a malignant disposition, there is so much attachment and respect on the part of the brute, that it requires a long course of ill treatment to push him beyond the bounds of endurance and make him turn on his master. But there are occasions when he is not less prompt to avenge an insult on the spot, and such an one occurred during the siege of Bhurtpore, soon after the commencement of the present century.

The beleagured city had for a long time been pressed by the British army attended by its host of camp-followers* and attendants. The hot season approached, and the dry burning winds were at hand: as they prevailed, every tank and every pond were dried up, and the enormous multitude of human beings and cattle were thrown upon the wells alone for their supply of water. The

* Some idea of the comparative number of camp-followers attached to a British army engaged in Indian warfare may be arrived at from the statement of Lieutenant Shipp, who, in one case, gives 80,000 camp-followers, where the fighting men were 8,000 only.

scenes of confusion at these points of attraction may be better imagined than described.

Two elephant drivers with their beasts were at one of these wells together, and when the usual struggle and confusion amid a war of words were at their height, one of the elephants, which was remarkably large and strong, snatched from the smaller and weaker one the bucket with which his master had provided him, and which he carried at his trunk's end. Loud and long was the squabble between the keepers. The little elephant quietly watched his opportunity, and when his gigantic aggressor was standing with his side to the well, retired a few steps, and then making a rush, came with his head full butt against his antagonist's side, and tumbled him in.

Here was a pretty business. The surface of the water was some twenty feet below the level of the ground, and the immersion of the elephant was not calculated to improve the quality of the spring; besides, how was he to be got out? Not that he seemed much disturbed at his ducking, for, though there were many feet of water below him, he floated about at his ease, appearing rather to enjoy his cool retreat, and to be in no haste to use any exertion for his deliverance.

At length the mohout bethought him of the fascines which had been employed in great numbers by the army in conducting the siege, and had them lowered into the well, with the hope that the animal might be induced so to place them under him as gradually to raise himself to the top. And here was exhibited a striking instance of the power of man over these massive creatures, and their quickness of perception and obedience. The mohout soon succeeded in making the elephant understand what he wished him to do, and the sagacious beast continued to dispose of the fascines thrown to him under his feet, to such good purpose, that he soon was enabled to stand upon them. But here the charm of the keeper's ascendancy seemed to be broken; for the sly elephant, finding himself on firm footing, struck work, and quietly made the most of the deliciously cold bath which had so unexpectedly fallen to his share, revelling in a luxury which he had not enjoyed for many a day. But what will not the love of arrack do? The bather was at last roused by the most earnest and stimulating promises of the intoxicating draught, and again began to arrange the fascines under his feet, till he had raised himself so high that, by removing a portion of the masonry surrour ding the top of the well, he was able to step out at the expiration of fourteen hours from the commencement of the affair.*

* See Griffith's Cuvier.

But numerous as are the stories told of the stern vengeance of the elephant, there are not wanting instances where the punishment inflicted by the injured beast has been of a degrading and even ludicrous character; as if scorn and contempt were the predominant feelings that dictated the retribution. The dirty water-spout that overwhelmed the treacherous Delhi tailor, who had treated the elephant to a prick with his needle instead of an apple; and the muddy shower bestowed on Lieutenant Shipp (who had irritated another by giving him a large quantity of Cayenne pepper between two pieces of bread), six weeks after the commission of the offence, and as a termination to the caresses and fondling of the lieutenant, are of this character, as well as the delayed vengeance of the elephant mentioned by Williamson under the name of Paugul, or fool. The Paugul, who had most likely been put upon like other butts till he could stand it no longer, had refused to bear a greater weight upon a march than he liked, and the angry quarter-master threw a tent-pin at the head of the obstinate beast. Some days afterwards, as the elephant was going to water, he came suddenly upon the quarter-master, seized him with his trunk, and lifting him among the branches of a large tamarind tree, there left him between heaven and earth, as being unworthy of either, to hold on if he were able, and get down if he could.

A very intelligent elephant was shown, some years since, in a caravan of wild beasts at a fair in the West of England. One of those practical jokers, whose wit lies in pouring melted butter into a friend's pocket, or conveying a putrid oyster into his plate, had been doling out some gingerbread nuts of the first quality to the elephant, who received the instalments, small as they were, with satisfaction and gratitude, manifesting the latter by the spontaneous performance of some of his tricks between the somewhat protracted intervals of supply. Suddenly, his benefactor produced a large paper parcel, weighing some two or three pounds, and presented it *en masse*. The elephant took it as it was, and consigned the whole to his powerful crushing-mill. Hardly, however, had he swallowed the dose, before he gave a loud roar, and exhibited all the symptoms of suffering severely from internal heat, handing—yes, handing, for the trunk acted as dexterously as a hand—the bucket to his keeper, as if beseeching for water, which was given to him, and of which he continued to pour floods sufficient to drive a mill down his capacious and burning throat.

"Ha!" said the joker, addressing his victim, "those nuts were a trifle hot, old fellow, I guess!"

"You had better be off," exclaimed the keeper, "unless you want the bucket at your head, and serve you right too."

The dispenser of ginger and pepper took the hint; for there was an angry glare in the drinker's eye, while the distressed beast was pumping up his sixth bucketful; and in good time he took it, for he had scarcely cleared the entrance of the show, when the empty bucket was hurled after him by the elephant with such force and correctness of aim, that, if he had been a moment later, his joking would, in all probability, have been terminated with his life on the spot.

A year had passed away, and the wayfarers from the country villages trod over the withered leaves that had, when fresh, green, and vigorous, shielded their heads from the burning summer's sun, as they again bent their steps to the same annual autumnal fair, where the elephant had been before exhibited, and where he was again ready to receive company.

Our joker was again among his visiters, and, forgetful of his narrow escape from the bucket, which, at the time, another wit observed he had been near kicking, came, as before, with one coat-pocket filled with "best nuts," and the other with hot nuts. He gave the elephant two or three nuts from the best sample, and then drew forth and presented him with a hot one. No sooner had the elephant tasted it, than he seized the coat-tails of his tormenter, and, with one whirling sweep with his trunk lifted him from the ground, till, the tails giving way, the man dropped half-dead with fright, and with his coat reduced to a jacket. The elephant, meanwhile, quietly inserted the end of his trunk into the pocket containing the best nuts, and leisurely proceeded, keeping his foot on the coat-tails, to discuss every nut of them. When he had finished the last, he trampled upon the pocket containing the hot nuts, till he had reduced them to a mash: and then, after having torn the tails to rags, threw the soiled fragments at the head of his facetious friend, amid the derision of the assembled crowd.

The late tenant of the elephantine apartments in the *Jardin des Plantes* manifested, according to a story related of him, no small sense of discrimination under somewhat unworthy treatment.

A painter was in the habit of choosing for his models the animals confined in the garden. When it came to the elephant's turn to stand for his portrait, the artist, wishing to represent the grim giant in a striking attitude, employed a little boy to throw apples into the mouth of the elephant, thus obliging him to keep his trunk uplifted. The apples were numerous, but the painter was not a Landseer; and as he had not the faculty of seizing and transferring character with Edwin's magical power and rapidity, the task was tedious. By the master's directions, the boy occasionally deceived the elephant by a simulated chuck, and thus eked out the supply.

Notwithstanding the just indignation of the baulked expectant, his *gourmandise* checked his irritable impatience; and keeping his eye on the still well-filled bag, he bore the repeated disappointments, crunching an apple, when it chanced to come, with apparent glee.

At length, the last apple was thrown and crunched: the empty bag was laid aside; and the elephant applied himself to his water-tank, as if for the purpose of washing down his repast. A few more touches would have completed the picture, when an overwhelming *douche* from his well-adjusted trunk obliterated the design, and drenched the discomfited painter. Having, by this practical application of distributive justice executed judgment on the instigator, the elephant, disdaining the boy, whom he regarded as the mere instrument of wrong, marched proudly round his enclosure, loudly trumpeting forth his triumph.

It is worthy of remark that, in modern times, the African elephant has not been brought under the domination of man for the purposes of utility or parade, whilst his Asiatic relation has been made to minister so largely to human convenience, and almost every phase of oriental pomp and luxury. When Kubla Khan amused himself with ornamenting his "stately pleasure dome"

> —— Twice five miles of fertile ground
> With walls and towers were girdled round;
> And here were gardens bright with sinuous rills,
> Where blossom'd many an incense-bearing tree,

and here these gigantic landscape-gardeners did good service; for whenever the khan received information that a handsome tree was growing in any place, he caused it to be dug up with all its roots and the earth about them, just as Sir Henry Stuart has since proceeded, and whatever were its size and weight, caused it to be transported by elephants to an artificial mount that rose in the enclosure, where the tree was added to the verdant group that crowned the hill. Nearly a hundred elephants were employed by Timour in conveying the stones for building the great mosque at Samarcand; and they have been most efficiently used in the East in ship-launching, and dragging vessels on shore.

We pass over the cruel pastime of fighting them with each other, or with tigers, wild horses, or dogs, and other barbarous sports of the Mogul amphitheatre. These degrading scenes want the excisement of danger and retributive excuse which dignify the hunter's craft, especially when the destruction of the man-eater is sought. Down to a late period, some of these hunting expeditions were conducted on a scale of prodigious grandeur.

When the Nawaub of Oude took the field, which he generally

did in the month of March, ten thousand cavalry, a like number of infantry, seven or eight hundred elephants, and from forty to sixty thousand camp-followers with grain and merchandise marched with him. From his palace at Lucknow this host went forth, Asoph-ul-doulah himself occupying the centre of the line, mounted on an elephant, and attended by two others, one bearing his state howdah, the other that which he used in the chase. On each side of the Nawaub was a prolonged rank of elephants. Straight on did this moving mass proceed regardless of consequences, annihilating the hopes of the husbandman, and deaf as an adder to his cries for mercy. Before the prince, the land was smiling with crops. He passed, and the torn and trampled vegetation looked as if a devastating hurricane had swept the country. Still onward, onward went the tens of thousands hemming in daily whole herds of antelopes for his highness's battues, and stopping nightly at appointed stations, where every luxury that Vathek could have wished for awaited the court, till they approached the stronghold of the buffaloes, leopards, panthers, and tigers, in the Thibet mountains. Here an encampment was formed, and, for weeks, the *carnivora* that had fattened upon the flocks and herds of the peasantry, paid the penalty of their ravages; the hunters thus, in some measure, making compensation for the injury done on their march.

Those hunting armies have now dwindled away before European rule, and the task of clearing the country from ferocious beasts is left to the gallantry of such avengers as "Koondah"* and his forest-raging co-mates.

An elephant, when he smells or sees a tiger, casts up his trunk almost perpendicularly, trumpets shrilly, and then immediately recurving it, secures the lower part in his mouth, thus presenting to the savage beast nothing but the rounded contour of the exposed part, well protected by the two flanking tusks. Then may be seen that peculiar determined expression on the faces of the men, which those who have seen it, never forget—an expression which, at length, leaves an indelible trace on the visages of some old tiger-hunters, and well it may, especially if the game sought be a confirmed man-eater. The Himalaya mountaineers are soon made aware of the vicinity of one of these murderous plunderers. First, from some lonely spot, children are missing, then a shepherd or shepherdess disappears, and, at last, the chief himself is carried off, as he lies asleep under the shade of his own tree.

* See the graphic papers of the "Old Forest Ranger" in the New Monthly Magazine.

It seems strange that people liable to such attacks, should have less apparent habitual terror of the tiger, than we who view him in a cage. The peasant will walk through the high grass of the jungle, confident in the protection of his gods, or firm in his belief of predestination, although he knows that the destroyer lurks in the neighbourhood; and, indeed, it seldom happens that even the man-eaters attack a man when he is in action. They are on the watch to surprise him when he is off his guard, or at rest.

By the way, the great Himalaya dogs when they are brought out to attack leopards, are clad like some of those represented in the old boar and stag hunts of Snyders and others, in defensive armour. A spiked collar and breast-plate protect the neck and narrow chest of the dog from the deadly bite of the great spotted cat.

The shows of the ancients, to which allusion has been made in a former chapter, independently of the mighty scale on which they were conducted, exhibit a striking difference when compared with those of the moderns. Where we have representations, they had things. With the exception of the Spanish bull-fights, no national combats with animals now exist in Europe. The days of Orson Pinnit, his bears with their pinky eyes, and stout English mastiffs, have long since passed away. Bull-baiting is happily extinct; and badger-baiting rarely practised, and then only "on the sly" in the neighbourhood of London. The celebrated ratticide Billy has long since gone to that bourne whence neither rats, dogs, nor travellers ever return. It is only in the East that

All the current of a heady fight

between elephants and other great quadrupedal gladiators may be witnessed. We have, indeed, had our Van Amburgh and other *dompteurs de bêtes*, whose advent was heralded, some years since, by the introduction of a real live elephant on the London boards.

The first appearance of this great performer will not be soon forgotten by those who were present.

The house was crowded to the ceiling; and when, at last, the curtain drew up, unveiling the first scene of the splendid Oriental melodrama, there was a cry of "down!" "down!" and then a breathless silence. The distant march was heard, and the mimic procession was seen afar off, winding its way over the hills and amid ravines, approaching nearer and nearer as the music became more audible. Gradually the stage was filled by a host glittering in all the splendour of new dresses and decorations: the host divided, and the elephant, gorgeously caparisoned, and bearing a gilded turret containing armed men, burst upon the spectators, who greeted the huge novelty with a tremendous shout and a per-

feet hurricane of applause as the elephant advanced. Those who were near, however, began to perceive that the animal, whose trunk was nervously moving from side to side, was reluctantly urged on from behind, and kept in a forward direction by the guides on each side. With some difficulty the unwieldy performer was got to the front amid increasing shouts, but there all control ceased. The terrified beast suddenly turned tail to the audience, and lifted its trunk with a shrill shriek of mingled anger and fear. At the same moment the "floats" in its rear were extinguished, and the affrighted fiddlers fled in all directions. Then came chaos; and in a few seconds the stage was cleared, the half-mad elephant alone remaining, without guide or mohout; and then did those eight mail-clad gentlemen-supernumeraries manifest a strong disposition to resign their elevated situations. One trembling leg was already advanced over the rocking battlements by each of the terror-stricken inmates, and unwillingly drawn back, as the frantic stage-manager in the wing, with uplifted fist and something very unlike a prayer, threatened them with instant discharge if they did not keep their places, and, as he put it, "do their duty." There they sat, looking deadly pale through their rouge, expecting instant destruction, but retained by the dread of losing the nightly five shillings, and of the awful reception that awaited them from their wives and families, when that loss and the manner of it should be made known to them. At length the oaths and exertions of the manager drove some of his cowed herd to their quarters. The mohout and guides sneaking up, succeeded in soothing the elephant and leading it off shivering in every limb. But use lessens marvel, and the obedient beast soon went through its part as discreetly as the biped actors. The experiment once made, this example was soon followed. Many of our readers will, for instance, remember the sagacious acting of the elephant at the Adelphi theatre, about eighteen years ago.

The two well-trained elephants at the Cirque in Paris so delighted the spectators lately, that, at the fall of the curtain, they were loudly called for. When they appeared in obedience to the call, wreaths and *bouquets* were thrown at their feet. These they gratefully lifted to their heads, *and swallowed.*

The quantity of elephantine remains spread so widely and so plentifully over the earth, and especially in Europe, demand some notice before this outline of their history is ended. And here we may observe, that of this form but three species are well known. These are the African elephant, the Asiatic elephant, and the fossil elephant or mammoth; for, notwithstanding the number of fossil species recorded, amounting, according to Herrmann von Meyer, to eight, Professor Owen has clearly proved that all the

fossil remains of the elephants hitherto found in Europe are referable to one species only—*elephas primigenius*.*

Before the specific distinctions marked in the teeth were clearly defined, those who would not admit the existence of extinct species, endeavoured to account for the numerous specimens found in Italy by assigning them to the elephants brought thither in the ancient Italian wars. But, at last, some of these relics were discovered in Britain, and as the antiquaries could not find any account of more than one elephant imported by the Romans.† Dr. Cüper attributed the molars of the elephant found in blue clay beneath vegetable mould and loam in Northamptonshire, and the tusks dug out of the gravel in Gray's-inn-lane, in the time of Sir Hans Sloane, to *the* elephant introduced by Cæsar. This mare's nest passed muster very well till the progress of further works brought more to light, when it became apparent that if all these remains belonged to the Roman conqueror's elephant, the teeth of that extraordinary beast must have far exceeded in number the multitudinous beavers shown as "Bradshaw's Hat," and the limbs, Cromwell's interminal exhibited stock of boots. Besides, some fossil elephant's teeth had been discovered in Ireland, whose soil was never sullied by the sandals of Cæsar's soldiery.

Still, only the *disjecta membra* had been detected, when, in 1709, Schumachoff, the Tungusian hunter, who was also a collector of fossil ivory, observed among the ice-blocks at the mouth of the river Lena a huge indefinite mass. He approached as near to it as he could, but failed to make out what it was, though he made the first step in discovery by ascertaining what it was not: for he saw enough to convince him that it was not one of the pieces of floating timber frequently found there.

* There are good grounds for concluding that the fossil species found in the Sewalik tertiary formations are distinct. Dr. Falconer and Major Cautley in their highly interesting and beautifully illustrated work, "*Fauna antiqua Sivalensis*, being the Fossil Zoology of the Sewalik Hills in the North of India," now in the course of publication, describe no less than seven species of *Elephas* and three of *Mastodon*. One of these, *E. Namadicus*, is remarkable for a bulge around the forehead. The skull looks as if it were frowning on the spectator, and brings to mind the tradition of the Virginian Indians relative to the *Mastodon* of America, which stated that as a troop of these terrible quadrupeds were destroying the deer, bisons, and other animals created for the use of the Indians, the Great Man slew them all with his thunder, except the Big Bull, who fearlessly presented his enormous forehead to the bolts and shook them off as they fell; till, being at last wounded in the side, he fled towards the great lakes, where he is at this day.

The enormous size of some of the proboscidean species recorded by Dr. Falconer and Major Cautley is quite astounding; and the *Reptilia* described by them are formed on the same gigantic scale.

† Polyænus, lib. viii., c. 23.

When he returned the next year he perceived that the mass was more free from the ice, and that it had two projections. About the end of 1801, he beheld the entire side of a gigantic animal and one of its enormous tusks. Here was a mine of wealth for the ivory-collector, and he hastened home to tell the news to his wife and friends. But this mine would seem to have been like the treasures of old, where there was a guardian spirit of no very gentle character to be overcome, or a fiend roused, ready to rend the intruder limb from limb. His intelligence was received by his family and familiars in a way that turned his joy into mourning. The old men shook their heads and remembered a saying of their fathers, that the discovery of a similar monster had been speedily followed by the death of all the family of the discoverer. Imagination and superstition will do their work when the mind is not enlightened by education and fortified by learning and experience, and our poor Tungusian fell ill in good earnest. He recovered, however, and cupidity came hand in hand with returning health, for he thought of the noble tusks of the icy-shrouded mammoth, and how much they would bring into his purse. The summer of 1802 had been cold and churlish, and the mammoth still lay almost as completely entombed in his glacier as ever; but towards the termination of the fifth year the more genial weather operated so effectually on the ice, that the result was an inclined plane, and down came the mountain of frozen mummy on a sandbank. In 1804, the recovered Tungusian visited his prize, cut off the tusks, and made fifty roubles by them in his dealings with a merchant.

When Mr. Adams arrived at the place, two years afterwards, that is, in the seventh year after the discovery, he found the mammoth, but it had undergone sad mutilation. The flesh of the carcase was so fresh, that the inhabitants of Jakataski fed their dogs with it, and the white bears, wolves, wolverines, and foxes, that had feasted on the remains, had left the traces of their footsteps around it. There lay the skeleton almost entirely fleshless, and complete with the exception of one fore-leg, with which the strongest of the unbidden carnivorous guests had probably walked off. The ligaments and portions of the skin held together the vertebral column, one shoulder-blade, the haunch bones, and the other three extremities. A dry skin covered the head, and one well-preserved ear was tufted with hair. The apex of the lower lip had been gnawed away; the upper lip and proboscis had been devoured, and the molar teeth were brought into view. In the skull was the brain, but as dry as the remainder biscuit after a voyage. Of the tail only eight of twenty-eight or thirty vertebræ remained; but a fore-foot and a hind-foot were covered with skin,

and the sole remained attached. Some of the skin* is in the museum of the Royal College of Surgeons of England, and, when it was first brought there, it smelt offensively. The covering of the skin, which was of a dark gray colour, was woolly and hairy. The woolly or curly portion was of a reddish hue, and some of the coarse, long black hairs or bristles were a foot and a half long. This mammoth was a male; his neck was ornamented with a long mane, and he must have been one of the Falstaffs of the primeval forests; for, according to Schumachoff, he was so fat that his portly belly hung down below his knees. The skeleton with the tusks is now mounted at St. Petersburg, in the museum of the Petropolitan Academy. From the front of the skull to the end of the tail, or rather, of as much as remains of it, the skeleton measures sixteen feet four inches; the height is nine feet four inches; and the tusks, measured along the curve, were nine feet six inches.

Such was the well-preserved animal enclosed in the ice: but "how gat he there?"

Cuvier, and he had his followers, had recourse to the *Deus in machinâ*, in the shape of a great and sudden geological cataclysm, affirming that the change of temperature was immediate, in short, that at the moment when the animal was destroyed, the soil on which he trod became "fields of thick-ribbed ice." Lyell, with more respect for the Horatian precept,† and in a truly philosophical spirit, shows how these phenomena, which were supposed to be the result of sudden and violent changes, may be accounted for by the gradual operation of ordinary and existing causes,‡ and Professor Owen, in his admirable "History of British Fossil Mammalia," entirely dissipates the difficulty raised with regard to the non-existence of the food necessary for the animal's subsistence. It would be unjust to the professor to clothe his reasoning in other words than his own.

"Dr. Fleming," writes the professor, "has observed that 'no one acquainted with the gramineous character of the food of our fallow-deer, stag, or roe, would have assigned a lichen to the rein-deer.' But we may readily believe, that any one cognisant of the food of the elk, might be likely to have suspected cryptogamic vegetation to have entered more largely into the food of a still more northern species of the deer tribe. And I can by no means subscribe to another proposition by the same eminent

* Mr. Adams in his interesting account states that the skin was of such extraordinary weight, that ten persons found great difficulty in transporting it to the shore.

† De arte poeticâ, line 191. ‡ Principles of geology.

naturalist, that 'the kind of food which the existing species of elephant prefers, will not enable us to determine, or even to offer a probable conjecture concerning that of the extinct species.' The molar teeth of the elephant possess, as we have seen, a highly complicated and a very peculiar structure, and there are no other quadrupeds that derive so great a portion of their food from the woody fibre of the branches of trees. Many mammals browse the leaves; some small rodents gnaw the bark; the elephants alone tear down and crunch the branches, the vertical enamel-plates of their huge grinders enabling them to pound the tough vegetable tissue, and fit it for deglutition. No doubt the foliage is the most tempting as it is the most succulent part of the boughs devoured; but the relation of the complex molars to the comminution of the coarser vegetable substance, is unmistakeable. Now, if we find in an extinct elephant the same peculiar principle of construction in the molar teeth, but with augmented complexity, arising from a greater number of triturating plates, and a greater profusion of the dense enamel, the inference is plain that the ligneous fibre must have entered in a larger proportion into the food of such extinct species. Forests of hardy trees and shrubs still grow upon the frozen soil of Siberia, and skirt the banks of the Lena as far north as latitude 60°. In Europe, arboreal vegetation extends ten degrees nearer to the pole, and the dental organization of the mammoth proves that it might have derived subsistence from the leafless branches of trees, in regions covered during a great part of the year with snow. We may, therefore, safely infer, from physiological grounds, that the mammoth would have found the requisite means of subsistence at the present day, and at all seasons, in the sixtieth parallel of latitude; and, relying on the body of evidence adduced by Mr. Lyell, in proof of increased severity in the climate of the northern hemisphere, we may assume that the mammoth habitually frequented still higher latitudes at the period of its actual existence. 'It has been suggested,' observes the same philosophic writer; 'that as in our time, the northern animals migrate, so the Siberian elephant and rhinoceros may have wandered towards the north in summer.' In making such excursions during the heat of that brief season, the mammoths would be arrested in their northern progress by a condition to which the rein-deer and musk-ox are not subject, viz., the limits of arboreal vegetation, which, however, as represented by the dominating shrubs of Polar lands, would allow them to reach the seventieth degree of latitude. But with this limitation, if the physiological inferences regarding the food of the mammoth from the structure of its teeth be adequately appreciated and connected with those which may be legitimately

deduced from the ascertained nature of its integument, the necessity of recurring to the forces of mighty rivers, hurrying along a carcase through a devious course, extending through an entire degree of latitude, in order to account for its ultimate entombment in the ice, whilst so little decomposed as to have retained the cuticle and hair, will disappear. And it can no longer be regarded as impossible for herds of mammoths to have obtained subsistence in a country like the Southern part of Siberia where trees abound, notwithstanding it is covered during a great part of the year with snow, seeing that the leafless state of such trees during even a long and severe Siberian winter, would not necessarily unfit their branches for yielding sustenance to the well-clothed mammoth."

Gigantic as the Siberian mammoth was, there is evidence to prove that the species was developed to still greater proportions. We have seen a mammoth's tusk that measured ten feet two inches along the curve, and a comparison of the cast of the third or middle metacarpal bone of one found in the brick earth at Grays, in Essex (which may be seen in the museum of the English College of Surgeons), with the corresponding bone in the skeleton of Chunee in the same noble collection, will give some idea of the huge bulk of the extinct species.

The old bull mammoth was at least one-third larger in all his dimensions than the largest existing elephant; but no human eye beheld him as he stalked silently along in his might over desolate tracts where corn now grows, and the busy hum of civilization is heard,

"Lord of his presence and the land besides."

DRAGONS.

"The Dragon of Wantley churches ate
(He us'd to come of a Sunday),
Whole congregations were to him
A dish of Salmagundi.
Parsons were his black-puddings, and
Fat aldermen his capons,
And his tit-bit the collection plate
Brimful of Birmingham halfpence.
The corporation worshipful
He valued not an ace:
But swallow'd the mayor, asleep in his chair,
And pick'd his teeth with the mace!"

HEROICK BALLAD.

GREAT as has been the progress made in the wide field of natural history within the last thirty years, in no direction has the advance been more decided or more satisfactory, than in that hitherto obscure part of it which sepulchres the remains of animals that lorded it over sea and land when this earth was young.

And although there is nothing among the earliest known organized forms fashioned by the hand which weigheth all things, that is not pregnant with proof of the same care and design and harmony in the construction of the animal, as shines forth in the being born into the world yesterday, let no one picture unto him or herself the youth of our planet as lovely to any but the grosser natures then placed upon it to breathe an atmosphere which no human lungs, nay, no lungs of any vertebrate of a high grade could have long breathed as the breath of life. It was a place of dragons: fit only for Saurians, Batrachians, and the like.

"Dragons?"

Yes, dragons: not such as the small, living winged reptiles, that skim from place to place in search of their insect food, relying on their natural parachutes, constructed upon a somewhat safer principle than that of poor Mr. Cocking, and rejoicing in the generic name of *Draco*; but downright enormous dragons with bellies as big as tuns and bigger; creatures that would have cared

little for Bevis's sword "Morglaye," nor that of the Rhodian Draconicide, nor St. George's "Askalon," no, nor the "nothing-at-all" of More of More Hall, even if those worthies could have existed in the pestiferous region in which the said dragons revelled.

For in a slough where *Calamites* and other gigantic marsh-plants, now extinct also, rooted themselves at ease, and reared themselves into a damp jungle; in a dreary bog, to which the undrained Pontine marshes would have been the land of health, was their lair. In such a nauseous quag, wholesome to them, these monsters roared and wallowed: there they growled their horrid loves, and there they made war upon each other—the strong devouring the weak, and the carnivorous "chawing-up" the herbivorous in the midst of the wildest convulsions of a nascent world.

While this was going on upon what then passed for dry land, great sea-dragons rushed through the waves, or sported on the surface of an ocean not unlike, as far as the waters were concerned, our own, while flying dragons hovered, like Shakspeare's *Witches*, through the fog and the filthy air. These last ancient Saurian forms have left no living representative upon the earth.

Just one hundred years ago, Scheuchzer published his "Physica Sacra," and favoured the world with an engraving of the remains of the "Homo diluvii testis." Those were, indeed, the days of confident assertion, when the blind led the blind; but it is difficult to believe how a physician, for such was Scheuchzer in every sense of the word, writing M.D. after his name, could mistake the fossil bones of a salamander, or rather of a newt, for those of a human being. "Homo diluvii testis," what a comprehensive form of words—Poussin's picture rises before us as we read them—and yet 'twas neither man, woman, nor child, but a squab extinct reptile, that never witnessed the deluge at all.

As the Zurich physician had figured the man, he gave his draughtsman directions to portray man's eternal enemy, and the accomplished artist has with some invention and in his best manner represented the fiend. The usual diabolical head and shoulders of the time are placed upon the body of a huge polypod caterpillar.

Now, we do not feel disposed to go so far as the charitable preacher, who, after exhausting his benevolent prayers for all earthly beings, proposed to his congregation to pray for "the puir deil." No, let justice be done; but this is more than *summum ius*, and beyond *summa injuria*. The doom was deserved; but a degradation of the old dragon below any thing vertebrate to the base condition of an annulose animal, to a vile grub, was not in

the sentence, and if the Prince of Darkness be a gentleman, Scheuchzer has not treated him like one.

"There are more ways than one of looking at a subject," says Mr. Serjeant Rebutter, retained in defence of the author of "Physica Sacra;" "there are, I say, more ways than one of looking at a subject: permit me to suggest that Beelzebub was the lord of flies, and a caterpillar *may* be a butterfly.

"Then, sir, the moral is as bad as the design; but the truth is that degradation was meant, and the notion is clumsily conveyed. Scheuchzer seems to have shone in the one case as brightly as in the other, and has treated his subjects very scurvily in both."

But to return to our mortal dragons.

It may be fairly asked by the uninitiated why the philosophers of 1943 should not smile at the Cuviers, and at the Conybeares, the Bucklands, and the Owens of 1843, as complacently as we of the present day curl our lip at old Scheuchzer?

Because his work was almost all guess: because he and those of his time jumped to conclusions instead of painfully making them out, and the authority of a learned name was sufficient with the multitude to insure without further inquiry the reception of any *dictum*, however absurd on the face of it, as Scheuchzer's assertion, coupled with his imposing plate undoubtedly was. No man who had the knowledge of a diligent medical student in the first half year of his anatomical studies could, if he had looked attentively on that plate, much less on the fossil itself, have come to the conclusion that it was an anthropolite. But Scheuchzer was blinded by theory: he would not apply what knowledge he had: he pronounced the humanity of the fossil to be without a shadow of doubt; he appealed to it as "a relic of the accursed race which had been buried under the great waters;" and he was for a time, implicitly believed. It was not till 1758 that Gesner, apparently for the first time since Scheuchzer's announcement, threw doubt on his declaration, and stated his own belief that the specimen was a fish (*Silurus*).

Cuvier, before whose eye all false fossil pretensions vanished, and every bone told its true story, came to Haarlem in 1811, and begged permission to work on the stone with a view to the further development of concealed parts. The figure of a salamander's skeleton was placed beside the fossil, and as the operation proceeded Cuvier had the pleasure of seeing the chisel bring to light the very bones which he had expected and which were portrayed in the figure.

A finer specimen than Scheuchzer's—that which belonged to Dr. Ammann of Zurich—is in the British Museum, and this gigantic fossil newt is now named *Andrias Scheuchzeri*.

Nothing in palæontology is, at present, taken on trust. Every statement and every opinion relating to the science undergoes the strictest scrutiny by acute and accurate critics.

The bony framework of the old bygone-world dragon is now as satisfactorily demonstrated as that of the human skeleton which hangs beside the lecturer of the Royal Academy.

That is a striking scene. There stands the professor in all the pride of intellect surrounded by the rising and risen pictorial talent of the day. He has to illustrate a proposition in his discourse and turns to a tall, shrouded figure behind him. The mantle is dropped, and a naked, living man in the bloom of health and strength starts forward, throwing his muscular and well proportioned body and limbs into the required attitude. Every being in the room is alive and attentive, all is in suppressed activity but the ghastly pendant form, and as the lecturer raises the dry bones to explain the action of the living model, and they drop from his warm hand like wooden cylinders, we almost fancy that the grim feature smiles as who should say

To this complexion, *you* must come at last.

Nor is the osseous system of the bygone dragons the only portion of their history clearly unfolded. Their muscular development, their organs of sense and of motion, their respiratory and circulating systems, the colour and quality of their blood, their digestive organs, their food, their integument, and, for the most part, their habits, are now as well known as the organization and natural history of the little agile lizard, that basks on the sandy heath in the neighbourhood of Poole.

With all due respect for the learned who usually monopolize that title, your geologist is the true antiquary. He deals with the relics of a former world; his statues and coins are the shells and bones stored up, in many cases before the creation of man; and with these he deciphers the annals of the earth. A thousand years in the history of man and his institutions present an accumulation of facts and doubts sufficient to daunt the stoutest Fellow of the Society of Antiquaries; but what are a million of years in the sight of the geologist?

Before we enter upon the zoological, anatomical, and geological history of these fossil reptiles, the only real dragons on a grand scale, and which we shall endeavour to give in future chapters in a popular manner, encumbered with as few learned terms as possible, it will be necessary for us, in this, to feel our way for awhile in the mists of antiquity, and point out to those who may be interested in the inquiry, as well as the twilight of the time

will permit, some of the traditions relating to dragons handed down to us.

If the infant Hercules, in his eighth month, as some say, but according to the exquisite twenty-fourth Idyll of Theocritus, in his tenth, strangled the two dragons sent by Juno for his destruction, Apollo, as soon as he was born, seized his bow and slew with his arrows the Python which the same jealous goddess—she had, in truth, some cause for jealousy—had sent to persecute his mother. And here let us pause for a moment, to pick up what information we can concerning this Python. The monster was said to have sprung from the mud and stagnant water that blotted the earth's surface after Deucalion's deluge, and although another legend states that it was produced from the earth, and sent upon the persecuting errand above alluded to, we pray our readers to bear in mind the first of these traditions.

Old stories tell how Hercules
A dragon slew at Lerna,
With seven heads and fourteen eyes,
To see and well discern-a.

Now what was this Lerna? It was said to be the lake into which the daughters of Danaus threw the heads of their slaughtered bridegrooms: here, according to many, harboured the hydra; and although some held with Hesiod that this hydra was the daughter of Echidna and Typhon, its origin was attributed by most to the putrescent contents of the lake. The ballad above quoted has been very sparing in the number of heads which it bestows on the Lernæan hydra. Alcæus gave that renowned dragon nine, Simonides fifty, and Diodorus one hundred. Sharp work for Hercules with his arrows and club, and his assistant, Iolas, with his actual cautery, if Diodorus be correct in his numbers.

The *Megalaunæ* of Pausanias, dragons or serpents thirty cubits long, inhabiting India and Africa, were Pythons of the modern nomenclature, probably, but none of your true crested dragons, which appear to have been divisible into five classes:

1st. Those without either wings or legs, *οἱ πολλοι*.

2d. Those with two feet and no wings. The Lernæan hydra and the dragon that laid Rhodes waste, seem to have belonged to this class. These wingless bipeds evidently took a step considerably beyond the legless.

3d. Those with four feet of a still higher grade, and somewhat rare.

4th. Those with two feet and two wings, yet more exalted; and

5th. Those with two wings and four feet, which seem to have soared to the highest pitch of dragon aristocracy.

These dragons were not all cruel destroyers and worthless ravagers; some of them were worthy creatures, taking pleasure in doing good. Such were those two that licked the eyes of Plutus at the temple of Æsculapius with such happy effect that he began to see; but the dragons unfortunately died, and he had a relapse from which he does not seem likely to recover in our days. Others again were trustworthy, and suffered accordingly: for the hydra was not the only dragon against which the adult Hercules was pitted. There was that terrible sleepless one sprung from Typhon, that kept watch

> All amidst the garden fair
> Of Hesperus and his daughters three
> That sang around the golden tree—

with its hundred heads and as many voices. We are quite aware that some reformers have reduced the heads to one, and that on the shoulders of the shepherd who kept the flocks, *μῆλα*,—oh, those ambiguous Greek words—of his good masters or mistresses. And so because *μῆλον* signifies a sheep as well as an apple, we are to lose our Hesperian dragon? No, by St. George!

Well, this honest dragon, if all tales be true, was basely murdered by Hercules while doing his golden-apple-watching duty, and the demi-god immediately proceeded to rob the orchard: the poor dragon went to heaven, where he may be seen to this day by those who know where to look for him, with the foot of the murderer, who from his high connexions contrived to get there too, upon the head or heads of his victim.

Notwithstanding these exceptions, however, your dragon, generally speaking, was a most cantankerous monster.

Of the crowned basilisk, the terror of all other dragons, and general destroyer of animal and vegetable life, who could slay with its eye, and make the weapon that smote it the conductor of its deadly poison to the withering arm that wielded it, whether in its apod form or octopod shape, we must only observe that it has sunk into a very harmless, but somewhat terrible looking lizard. A whole chapter might be occupied with the marvellous stories connected with this horror; but we have dragons more than enough on our hands and spare the infliction.

According to Philostratus, your mountain dragon had in his youth a moderate crest, which increased as he grew older, when a beard of saffron colour was appended to his chin; but the dragons of the marsh had no crests. They attained to an enor-

mous size, so that they easily killed elephants. Ælian and others make their length from thirty or forty to a hundred cubits. Posidonius described one a hundred and forty feet long that haunted the neighbourhood of Damascus; and another, whose lair was at Macra, near Jordan, was an acre in length, and of such bulk that two men on horseback, with the monster between them, could not see each other. Then, was there not in the library of Constantinople, according to Ignatius, the intestine of a dragon one hundred and twenty feet long, on which were written the Iliad and Odyssey in letters of gold?

A subject so pregnant with the wild and wonderful was not likely to be missed by the Scalds of the Gothic nations, nor by the bards of the ancient British. Before the revival of letters these were the historians of the time, and they interwove among their facts the embellishments of dragons, giants, dwarfs, and the like, fit machinery for arresting the attention of their audience. Firm believers, for the most part, in enchantment and the existence of those romantic beings, they delighted in astonishing their hearers with recitals of combats with monsters such as Schiller's "Kampf mit dem drachen," so admirably illustrated by Retzsch.

Sometimes a true story was veiled under the allegory. Thus, the youth of the pirate king, Regner Ludbrog, who ruled in Denmark in the year 800, or thereabout, was marked by a gallant exploit. The story ran that the lovely daughter of a Swedish prince was intrusted by her father during his absence on a distant expedition to the care of one of his strongest castles, and one of his most tried officers. But

> You may train the eagle
> To stoop to your fist;
> Or you may inveigle
> The Phœnix of the east;
> The lioness ye may move her
> To give o'er her prey;
> But you'll ne'er stop a lover
> He will find out the way—

and the guardian fell in love with his beautiful ward, bearded the prince, her father, from his almost impregnable fortress, and held her against all comers.

The prince, after stamping and raving according to the most approved forms of the eighth century, put forth a proclamation promising his daughter in marriage to him who should conquer the treacherous guard and deliver her from thraldom. Many were the competitors for the prize, but the castle stood strong, and he who held it was an experienced captain. All the adventurers

failed till Regner buckled on his armour. The fortress could not resist his fierce attack: he carried it by storm, delivered the lady, and obtained her as the reward of his valour.

How did the Scalds relate this action? The name of the traitor was "Orme," and "Orm" in the Swedish language signifies a serpent, so they by a slight poetical license represented the fair daughter as detained from the agonised father by a ruthless dragon which Regner slew and set her free. Regner himself, who was a poet of celebrity, strengthened this version by adopting it in his own Runic rhyme, recording the exploits of his life.

Nor were the nations of the south less credulous upon the subject of dragons. So late as 1557 we find in the "Portraits de quelques animaux, poissons, serpents, herbes et arbres, hommes et femmes d'Arabie, Egypte, et Asie, observez par P. Belon du Mans," under a terrific figure of a winged biped dragon superscribed "Portrait du Serpent ælle," the following quatrain,

Dangereuse est du Serpent la nature,
Qu'on voit voler pres le mont Sinai.
Qui ne seroit, de le voir, esbahy,
Si on a peur, voyant sa pourtraiture?

Gesner copies this likeness of the dragon which, it appears, was also in the habit of flying out of Arabia into Egypt, and he adds three other cuts of formidable dragons, one apod and wingless, another apod and winged, and a third in a most rampant state, winged, stinged, biped, and clawed. Aldrovandi (1640) has cuts of many large flying dragons from Paré, Grevinus, and others, and Jonston (1657) collects most of the portraits of basilisks and dragons given by Aldrovandi and others up to his time.

It is hardly to be wondered at that monsters of which so much had been said and sung, to say nothing of pictorial representation, should have become desiderata for the cabinets of the curious, and it seems to have been no bad speculation to manufacture specimens for collectors. The skates or rays among the fishes offered admirable materials for this purpose, and a very little ingenuity in cropping, drying, and distorting, soon transformed them into most desirable dragons. Others were made up with much greater care. Such were the biped seven-headed hydras figured by Gesner, Aldrovandi, and Jonston, one of which was brought from Turkey to Venice "Anno a Christo incarnato tricesimo supra sesqui millesimum mense Januario," and afterwards given "Francorum regi." It was valued at six thousand ducats and appears to have been put together even more skilfully than the mermaid that beguiled the good cockneys of their shillings some years

since. The museums of the Cokeltops of former days were nothing without their dragon, and as the rage for collecting increased, the market was supplied with some monster more hideous than the last purchase, and well worthy of a place on the standard of the Brother of the Sun and Moon. Of course every collector's dragon was the real Simon Pure, and above all suspicion. Tradescant's museum (1656) boasted of "Two feathers of the Phœnix tayle," and "A natural dragon above two inches long."

In the early literature of our own country, especially in the ancient ballad and broadside, dragons shot forth in all their glory, only to be eclipsed by the valour of our champions. Nobody was anybody in the old chivalry days who had not slain his dragon.

One of the oldest, if not the oldest of these poetical legends, well known in Chaucer's time, was that which set forth the deeds of "Syr Bevis of Hampton." The following is the description of the dragon in that canticle:

Whan the dragon, that foule is,
Had a syght of Syr Bevis,
He cast up a loude cry,
As it had thundred in the sky;
He turned his body towarde the son;
It was greater than any tonne;
His scales were brighter than the glas,
And harder they were than any bras:
Betweene his shoulder and his tayle,
Was forty fote without fayle.
He waltred out of his den,
And Bevis pricked his stede then,
And to him a spere he thraste
That all to shyvers he it braste:
The dragon then gan Bevis assayle,
And smote Syr Bevis with his tayle;
Then downe went horse and man,
And two rybbes of Bevis brused than.

The fight was long and fearful:

There was a well, so have I wynne,
And Bevis stumbled right therein.
Than was he glad without fayle,
And rested awhile for his avayle;
And dranke of that water his fyll;
And then he lepte out with good wyll,
And with Morglaye his brande,
He assayled the dragon, I understande:
On the dragon he smote so faste,
Where that he hit the scales braste:

The dragon then fainted sore,
And cast a galon and more
Out of his mouthe of venom strong,
And on Syr Bevis he it flong:
It was venomous y-wis.

This well gave Syr Bevis the victory; for, whenever he was hurt sore, he went to the well, washed, and came forth

——————— as hole as any man,
Ever freshe as when he began:
The dragon saw it might not avayle
Beside the well to hold batayle;
He thought he would with some wyle,
Out of that place Bevis begyle;
He would have flowen then away,
But Bevis lept after with good Morglaye,
And hit him under the wynge,
As he was in his flyenge,
There he was tender without scale,
And Bevis thought to be his bale.
He smote after, as I you saye,
With his good sword Morglaye.
Up to the hiltes Morglaye yode
Through harte, liver, bone, and bloude:
To the ground fell the dragon,
Great joye Syr Bevis begon.
Under the scales all on hight
He smote off his head forth right.

This, as the Bishop of Dromore remarks, is evidently the parent of the dragon in the "Seven Champions," slain by St. George, as any one may satisfy himself by comparing the two descriptions. Nor is it uninteresting to turn from the dragon of the old romance to that in Spenser's "Faery Queen," with its "wynges-like sayls, cruel-rending clawes, yron teeth, and breath of smothering smoke and sulphur;" and then to that most striking passage in the "Pilgrim's Progress," descriptive of the battle between Christian and Apollyon, who spake like a Dragon, and when at last, says Bunyan in his dream, Christian gave him a deadly thrust, "spread forth his dragon's wings, and sped him away that I saw him no more."

Sir Guy of Warwick had slain more than one dragon in his time. Read his own account of the feats.

I went into the souldan's hoast,
Being thither on embassage sent,
And brought his head away with mee,
I having slain him in his tent.

There was a dragon in that land
Most fiercelye mett me by the way

As hee a lyon did pursue,
Which I myself did alsoe slay.

When he came home he did greater actions; for, in addition to killing the dun cow, he demolished a monstrous bore—what a god-send a Sir Guy would be at the clubs!—and sent him to Coventry:

But first, near Winsor, I did slaye
A bore of passing might and strength;
Whose like in England never was
For hugeness both in bredth in length.

Some of his bones in Warwicke yet,
Within the castle there doe lye:
One of his shield-bones to this day,
Hangs in the city of Coventrye.

Then again:

A dragon in Northumberland,
I also did in fight destroye,
Which did both man and beaste oppresse,
And all the countrye sore annoye.

This dragon is thus portrayed in the old metrical romance:

A messenger came to the king,
Syr king, he said, lysten me now,
For bad tydinges I bring you,
In Northumberlande there is no man,
But that they be slayne everychone:
For there dare no man route,
By twenty mile rounde aboute,
For doubt of a fowle dragon
That sleathe men and beastes downe.
He is black as any cole,
Rugged as a rough fole:
His body from the navill upwarde
No man may it pierce it is so harde;
His neck is great as any summere;*
He runneth as swift as any distrere;†
Pawes he hath as a lyon:
All that he toucheth, he sleath dead downe.
Great winges he hath to flight,
There is no man that bare him might.
There may no man fight him agayne,
But that he sleath him certayne:
For a fowler beast then is he,
Ywis of none ever heard ye.

* A sumpter horse.
† The horse ridden by a knight in the tournament.

In the ballad of "Guy and Amarant," Sir Guy alludes to his former victories when he says to the thirsty giant,

——————— Goe drinke thy last,
Go pledge the dragon and the savage bore;
Succeed the tragedyes that they have past.
But never think to drinke cold water more;
Drinke deepe to Death, and unto him carouse;
Bid him receive thee in his earthen house.

Nor was this any vain boast: for Guy dealt this pagan,

A blowe that brought him with a vengeance downe.

Then Guy sett foot upon the monster's brest,
And from his shoulders did his head divide,
Which with a yawninge mouth did gape unblest,
Noe dragon's jawes were ever seene so wide
To open and to shut, till life was spent,
Then Guy tooke keyes and to the castle went.

The giant's miserable captives are then delivered, and among them some "tender ladyes," who

——————— had noe other dyett every day,
Than flesh of human creatures for their food.

It was hard that one who thus went about doing good, should have met with so ill a reward: all these brilliant actions could not save poor Sir Guy from being crossed in love, nor from the tragic end which the reader will find, if so disposed, recorded in his "Legend."

St. George's dragon was eminently pestiferous

Against the Sarazens so rude,
Fought he full long and many a day;
Where many gyants he subdu'd,
In honour of the Christian way:
And after many adventures past,
To Egypt land he came at last.

Now, as the story plain doth tell,
Within that country there did rest
A dreadfull dragon fierce and fell,
Whereby they were full sore opprest:
Who by his poisonous breath each day,
Did many of the city slay.
* * *
The dragon's breath infects their blood,
That every day in heaps they dye;
Among them such a plague is bred,
The living scarce could bury the dead.

The rest of this legend is so well known, that it would be needlessly occupying space to dwell further upon the subject of it.

We would only observe that the dragon's poisonous breath did the principal mischief.

But the time was at hand when the *coup de grace* was to be given to these dragon tragedies by the comic verse, showing how

> More of More Hall, with nothing at all,
> He slew the dragon of Wantley.

This clever performance was, as has been well observed, to the old metrical romaunts and ballads of chivalry what Don Quixote was to prose narratives of the same kind; and whether the witty author made his dragon out of a bloated Yorkshire attorney who had stripped three orphans of their inheritance, and had become intolerable by his encroachments and rapacity till a neighbouring gentleman took up the cause of the oppressed, went to law with him, and broke his hard heart; or some other passages in local history are therein alluded to, no dragon could be brought before the public thereafter without ridicule.

Thus much for the fabulous part of our subject, as far as it regards terrestrial dragons. We constantly find allusions to the malaria that surrounded these monsters and their localities. It is not unworthy of remark, that the crass air which the real extinct dragons breathed, would, as has been satisfactorily established, have been fatal to man if he had then been upon the earth which now holds their remains. That earth is one vast grave of cities, of nations, of creations.

SEA DRAGONS.

"And there in many a stormy vale
The scald hath told his wondrous tale;
And many a Runic column high
Had witnessed grim idolatry.
And thus had Harold in his youth
Learned many a Saga's rhyme uncouth—
Of that sea-snake, tremendous curled
Whose monstrous circle girds the world."

LAY OF THE LAST MINSTREL.

THE Hebrew words "Than," "Thanin," and "Thanim," which occur so frequently in the sacred Scriptures, seem to have puzzled the learned, for they sometimes appear as "whales," sometimes as "serpents," "sea-monsters" and "dragons" in their English dress. That some of the "Thanin" were crocodiles,—particularly the living idol which the Babylonians worshipped according to "the Historie of Bel and the Dragon, which is the fourteenth chapter of Daniel after the Latine," as the apocryphal book is headed in "the Bible translated according to the Hebrew and Greeke, and conferred with the best Translations in divers languages: Imprinted at London by ROBERT BARKER, printer to the King's most excellent Maiestie. 1615. *Cum Privilegio*"—seems generally agreed; and in Egypt the crocodile was one of the symbols of Typhon.

Your crocodile comes of a very ancient house; for, to say nothing of the evidence above hinted at, we think we have proof to show that the great Gangetic crocodile (not the Gavial) now fast retiring before the inroads of steam, was in existence with some of the extinct Saurians or Old-World dragons. What is all the blood of all the Howards to such ancestry?

The Edda, overflowing as it is with fiction, comprises no wilder tale than that of the "Jormungandr," the ocean-snake or dragon alluded to by the Wizard of the North in our motto.

Thor, no bad hand at battering serpents, as Fuseli has shown in one of his most characteristic works, was, it appears, wont to solace himself in his hours of relaxation with the *contemplative man's recreation*, and, accordingly, he went a fishing for this monster. Having set forth his rod in his best style, he baited his hook with a bull's head, and like many other anglers who relate their adventures in trying for a trout of extraordinary dimensions, *very nearly* caught it;—the said trout being a twelve or fifteen pounder, and although his eyes have been greeted with the devices of half the fishing-tackle shops in London, still coolly enjoying his ancient haunt in the deep glassy eddy that curls by the side of one of the great Thames weirs, where half the mighty river comes thundering down. The snake, however, was not to be had, and is still reserved for the exploits which he is to perform in the battle royal between demons and divinities that is to precede the "Ragnarockr" or twilight of the gods.

It must have been a very tiny infant *Jormungandr* that Olaus Magnus has depicted in the shape of a sea-serpent, not above two or three hundred feet long, quietly intruding its head between the main and mizen masts of some "great ammiral," and cracking the crew like sugared almonds. To the same family must have belonged the "Reversus" of the Indian sea, by means of which the Cuba fishermen were said to fill their canoes with turtle, *et cætera*. This serpent-like looking anguilliform entity is figured with a kind of purse proceeding from his crown, and falling in a descending curve over his very sharp pike of a nose upon the head of a devoted seal which, thus "bonnetted," and staring with terror and astonishment, is held fast by the *Reversus*, as the *Retiarius* of old held his antagonist; whilst a piteous-looking turtle is biding his turn to be taken in like manner. Not that it is improbable that the highly coloured description of some ancient mariner of the alleged method of fishing with the adhesive *Remora*, by putting it overboard tied to a long string, till it fastens on some sleeping Testudinarian, which is thus drawn to the boat and secured, may not have run away with the artist's imagination, and produced the grand cut which graces the page of Aldrovandi.

But these legends were of yesterday; nor must we be tempted by Pontoppidan or Egede, nor by any modern sea-serpent or dragon, whether Scandinavian, Caledonian, or American, to forget our petrified old friends, who lead us back to a period long before the fair face of this blest Isle of beauty

"Arose from out the azure main;"

when the Trilobite adhered where the snail now creeps; and

when the extinct sea-dragons rushed through living groves of Encrinites and Pentacrinites, devouring fishes now only known in a fossil state, each other, and occasionally perhaps a Pterodactyle, in a universal round game of snap-dragon.

To arrest the *credat*, which most probably and pardonably will rise to the lips of those to whom such a scene is now first laid open, we must call in the aid of the Dean of Westminster.

"During these ages of reptiles," says the eloquent author of the "Bridgewater Treatise," "neither the carnivorous nor the lacustrine mammalia of the tertiary periods had begun to appear; but the most formidable occupants, both by land and water, were crocodiles and lizards, of various forms and often of gigantic stature, fitted to endure the turbulence and continual convulsions of the unquiet surface of our infant world."

"When we see," continues the Doctor, "that so large and important a range has been assigned to reptiles among the former population of our planet, we cannot but regard with feelings of new and unusual interest, the comparatively diminutive existing orders of the most ancient family of quadrupeds, with the very name of which we usually associate a sentiment of disgust. We shall view them with less contempt when we learn, from the records of geological history, that there was a time when reptiles not only constituted the chief tenants and most powerful possessors of the earth, but extended their dominion also over the waters of the seas, and that the annals of their history may be traced back through thousands of years antecedent to that latest point in the progressive stages of animal creation when the first parents of the human race were called into existence."

This it must be granted is startling; but it is not more startling than true: hear Dr. Buckland again:—

"Persons to whom this subject may now be presented for the first time, will receive with much surprise, perhaps almost with incredulity, such statements as are here advanced. It must be admitted that they at first seem much more like the dreams of fiction and romance than the sober results of calm and deliberate investigation; but, to those who will examine the evidence of facts upon which our conclusions rest, there can remain no more reasonable doubt of the former existence of these strange and curious creatures, in the times and places we assign to them, than is felt by the antiquary, who finding the catacombs of Egypt stored with the mummies of men and apes and crocodiles, concludes them to be remains of mammalia and reptiles that have formed part of an ancient population on the banks of the Nile."

We will now venture to introduce to such of our readers as may be strangers to them, those

"Dragons of the wave"

THE TRUE ENALIOSAURIANS OR ANCIENT SEA DRAGONS.

These marine lizards were cold-blooded vertebrate animals, breathing atmospheric air,—zoophagous reptiles, in short, that had suffered a sea-change, adapting them to an aquatic life.

The peculiar modifications of the Saurian type necessary for fitting the animal for its watery career—in other words, the special enaliosaurian characteristics—consist, as Professor Owen points out in his valuable "Report on British Fossil Reptiles," in the absence of the ball and socket articulations of the bodies of the vertebræ; the position of the nostrils at or near the summit of the head; their separated hæmapophyses;* and the numerous short and flat digital or finger-bones, which must have been enveloped in a simple, undivided, tegumentary sheath, forming in both the fore and hind extremities, a fin resembling in external appearance the paddle of the cetaceans or whales.

The anatomical structure of this highly interesting race, which has no existing representative, is so modified as to result in two generic types, to which Palæontologists have severally assigned the names of *Ichthyosaurus* and *Plesiosaurus*. With the former of these, which was first well defined, we will begin.

ICHTHYOSAURUS.

At the first glance the skull of an *Ichthyosaurus*, with its elongated snout and beak-like jaws armed with large destructive teeth, reminds the observer of the cranium of the cetaceous dolphins. But two striking differences soon present themselves; the first is the reduced development of the cavity for the brain, which is so ample in the comparatively highly-organized *Cetacea*, and the unanchylosed state of the cranial bones,—both phenomena indicating the lower or reptilian grade of the enaliosaurian: the second is the large size of the eye and of the orbit in which it is set. The external nostrils too, placed at a short distance in front of the orbits, mark the Saurian character of the animal.

The teeth are not lodged in distinct sockets as they are in the

* Professor Owen uses the term *hæmapophyses* to designate the two inferior laminæ developed generally to protect the great blood-vessels on the under surface of the *centrum* or body of the vertebræ.

Plesiosaur; they are free at their bases, but inserted in a groove between the outer and inner alveolar or socket-plates, and are more crocodilian than lacertian in their conformation.

This prolonged and formidably armed head, which is known to have reached six feet in length, permitted the opening of the elastic jaws to an enormous extent, and was joined to a very short neck,—so short, indeed, that the animal in the flesh presented in all probability no more appearance of it than a fish or a dolphin exhibits; that is, none at all. The articulating surfaces of the centre of the vertebræ were concave, and, as Professor Owen observes, lead to the inference that they were originally connected together by an elastic capsule filled with fluid, as are the vertebral joints of the back-bone of fishes and of the Perennibranchiate or most fishlike of the reptiles.

The four paddles, two anterior and two posterior, with which the fish-lizard worked its way through seas long since dried up, were more like the fins of fishes than the swimming paws of the whale-tribe; although in external appearance the resemblance to the latter is strong; for the typical number five, which reigns throughout the mammalian hand and foot, however fettered and invested by integument, is here exceeded, and the numerous little phalanges, or joints, resemble the articulated rays of the breast and belly-fins of fishes: besides which many cartilaginous bifurcate rays added to the horny constituents, aided in supporting the tegumentary expansion of the Icthyosaur's paddle.

But there was yet another portion of progressive machinery wanting to complete the outfit of this Preadamite. Professor Owen, with his usual acuteness and soundness, came to the following conclusions as to the structure of the tail:

"With these important modifications of the head, trunk, and extremities in immediate relation to aquatic progression, the law of the correlations of organic structure would lead us to anticipate some corresponding modification of the tail. Accordingly we find the vertebræ of this part to be much more numerous than in the previously described enaliosaurian group.* There is no trace, however, of any confluence of the terminal caudal vertebræ, or of any modification of their elongated neur—and hæmapophysial spines, such as form the characteristic structure supporting the tail of the osseous fishes. The numerous caudal vertebræ gradually decrease in size to the end of the tail, where they assume a compressed form; and thus the tail instead of being short and broad as in fishes, is lengthened out as in the crocodiles."

* The Plesiosauri.

Such being the structure and the inferences justly deduced from it, we shall next see how accident may be improved by a good observer.

The very frequent occurrence of the fracture of the tail about one-fourth of the way from its distal extremity, had led Professor Owen to suspect that the accident was connected with the presence of a tegumentary caudal fin; and the laterally compressed form of the terminal vertebræ since ascertained by Sir Philip Grey Egerton, afforded additional demonstration both of its existence and direction. The only evidence in fact, as Professor Owen observes, which the skeleton of the cetaceous mammal gives of the powerful horizontal caudal-fin which characterizes the recent animal, is the depressed or horizontally flattened form of the terminal vertebræ. He therefore infers, from the corresponding vertebræ of the Icthyosaur being flattened in the vertical direction, or from side to side, that it possessed a caudal tegumentary fin expanded in the vertical direction: and he recommends a narrow examination of the lias matrix, in which the tail may have been imbedded for the traces of carbonaceous discoloration, or of an impression of this fin, from which some idea might be formed of its shape and size.

The occurrence of such a desired impression is not so improbable as those unacquainted with the subject may suppose. Dr. Buckland described the tegument of the abdomen, and Professor Owen that of the fin, from specimens found at Barrow-on-Soar.

"Thus," says Professor Owen, "in the construction of the principal natatory organ of the Ichthyosaurus we may trace, as in other parts of its structure, a combination of mammalian, saurian, and ichthyic peculiarities. In its great length and its gradual diminution we perceive the saurian character; its tegumentary nature, unsupported by osseous rays, bespeaks its affinity to the cetaceans; while its vertical position brings it close to the peculiar condition of the natatory organ in the fish.

"But," continues the professor, "it may be argued, the horizontality of the caudal fin of the *Cetacea* is essentially connected with their exigencies as breathers of the atmospheric air: without this means of displacing a mass of water in a vertical direction, the head of the whale could not have been brought with the required rapidity and facility to the surface to inspire: and as the ichthyosaurus was also an air-breather, a like position of the caudal fin might be considered to be equally essential to its existence in the water."

To this objection, the professor replies that the Ichthyosaurus

not being warm-blooded, would not need to bring its head to the surface so frequently, or perhaps so rapidly, as the cetacean; and, moreover, a compensation for the absence of a horizontal terminal fin is provided in the presence of the two posterior paddles, which are wholly deficient in the *Cetacea*.

The professor's conception of the appearance of this bygone form, "in his habit as he lived," is, that the animal must have presented the general external figure of a huge predatory abdominal fish, with a longer tail and smaller caudal fin than usual; scaleless, moreover, and covered with a smooth or finely-wrinkled skin analogous to that of the *Cetacea*. But a closer inspection of the enduring parts of these singular inhabitants of the ancient deep, shows, he justly observes, that under their fishlike exterior was concealed an organization which, in the main is a modification of the saurian type.

A word or two now as to the enormous and curiously constructed eye of the Ichthyosaur, which must have possessed great visual powers, always on the watch to minister to its predaceous habits and to preserve it from the attacks of the larger individuals of its own kind; for that the Ichthyosaurs preyed on each other as well as on the Plesiosaurs and fishes, is as clearly proved as that the pike will dine on the pickerel.

This eye was both a microscope and a telescope, modified in its action by an apparatus similar to that which exists among the feathered tribes, and is most highly developed in the birds of prey. Like the eagles and the owls, the Ichthyosaurus was furnished with a bony sclerotic ring, or circle of osseous plates, arranged around the aperture where once the pupil glittered, and which with its attendant muscles altered the convexity of the cornea, so as to adjust the scope according to the necessities of the animal. Was a near object to be examined? — this machinery by the retraction of the plates protruded the eye, which thus became microscopic. Was distant vision required?—the plates resumed their ordinary position and a telescopic range was secured. Here, in short, was an instrument to light the Ichthyosaur by day or by night, near the surface and in the deep, armed against external injury in the first-named locality, and against the pressure to which it must have been frequently subjected in the second.

As far as the known specimens can lead us to conclusions with regard to size, some of the species of the Ichthyosaurus, when full grown, must have exceeded thirty feet in length. The great relative proportion of the eye may be imagined from Dr. Buckland's declaration that it was sometimes larger than a man's head.

Ten species of these extinct Sea-dragons are enumerated by

Professor Owen, four described by the Rev. W. Conybeare, one by Mr. Kœnig, and five by himself.

PLESIOSAURUS.

With much of similarity in general form to the Ichthyosaur, the ancient Plesiosaur, its contemporary, presents considerable differences even in external appearance. The first and most striking is the excessive length of the neck and the comparative smalless of the head. Cuvier says of this inhabitant of the ancient world of waters, that it is the most heteroclite of forms and one which seems best to deserve the name of monster.

"To the head of the lizard," says Dr. Buckland, "it united the teeth of the crocodile; a neck of enormous length, resembling the body of a serpent; a trunk and tail having the proportions of an ordinary quadruped; the ribs of a chamelion; and the paddles of a whale."

To the Rev. W. Conybeare and Sir Henry de la Beche we are indebted for the notice of this most extraordinary addition to the ancient Fauna, the first specimens of which appear to have been discovered about twenty years ago.

To form the head of a Plesiosaur we must combine the characters observable in the Ichthyosaur, the crocodile, and the lizard; but to that of the last-named saurian, the head of the Plesiosaur bears the nearest approximation.

"It agrees," says Dr. Buckland, "with the Ichthyosaurus in the smallness of its nostrils, and also in their position near the anterior angle of the eye; it resembles the crocodile in having the teeth lodged in distinct alveoli; but differs from both in the form and shortness of its head, many characters of which approach closely to the Iguana."

The teeth are comparatively slender and sharp-pointed.

The swanlike neck which is almost as long as the body and tail together, consists of from twenty to forty vertebræ. The tail is relatively much shorter than that of the Ichthyosaur, and there is, Professor Owen observes, an obvious reason, for the curtailment of this part of the animal; because the length and mobility of the neck of the Plesiosaur renders a special development of the tail for producing the lateral movements of the head unnecessary.

In the anterior or pectoral extremities the digits never exceed the metacarpal bones, which are five in number. The first, or radial digit, corresponding with the thumb, has generally three; the second six or seven, the third eight or nine, the fourth eight,

and the fifth six phalanges. Professor Owen, who gives these numbers, adds that there can be little doubt that they were enveloped, like the paddles of *Cetacea*, in a common sheath of integument, and that, from the natural curve of the digits, the paddles of the Plesiosaur must have had a more elegant and tapering form, and have possessed greater flexibility than those of the modern whales.

The posterior or pelvic extremities almost always equal, and sometimes, as in *Plesiosaurus macrocephalus*, exceed the anterior extremity, but they closely correspond with them in their radiated appendages. The five metatarsals and their digits, Professor Owen observes, correspond in structure with those of the fore-paddle. The first or tibial metatarsal, he tells us, supports three phalanges, the second five, the third eight or nine, the fourth eight, and the fifth six phalanges. The structure of the bones of this extremity indicate, in Professor Owen's opinion, that the hind paddle had a freer inflection forwards or upon the tibia, than in the opposite direction; and he thinks that it may have given a compound motion to the propelling stroke of the paddle, similar to that which in skilful rowing is termed "feathering the oar." He further remarks, that the articular extremities of the phalanges of both the fore and hind paddles are sub-concave, with an irregular surface, indicating that they were joined by ligaments or fibro-cartilage, and not by a synovial membrane.

But what were the habits of this chimæra-like creature? The best answer will be given by the Rev. W. Conybeare, who thus infers those of *Plesiosaurus dolichodeirus*:

"That it was aquatic is evident from the form of its paddles; that it was marine is almost equally so, from the remains with which it is universally associated; that it may have occasionally visited the shore, the resemblance of its extremities to those of the turtle may lead us to conjecture; its motion, however, must have been very awkward on land; its long neck must have impeded its progress through the water; presenting a striking contrast to the organization which so admirably fits the Ichthyosaurus to cut through the waves. May it not therefore be concluded (since, in addition to these circumstances, its respiration must have required frequent access of air), that it swam upon or near the surface, arching back its long neck like a swan, and occasionally darting it down at the fish which happened to float within its reach. It may, perhaps, have lurked in shoal water along the coast, concealed among the seaweed, and raising its nostrils to a level with the surface from a considerable depth, may have found a secure retreat from the assault of dangerous enemies; while the length and flexibility of its neck may have

compensated for the want of strength in its jaws, and its incapacity for swift motion through the water, by the suddenness and agility of the attack which they enabled it to make on every animal fitted for its prey, which came within its reach."

Professor Buckland is of opinion that the tail, being comparatively short, could not have been used like the tail of fishes, as an instrument of rapid impulsion in a forward direction; but was probably employed more as a rudder to steer the animal when swimming on the surface, or to elevate or depress it in ascending and descending through the water. The same consequence as to slowness of motion, would, he thinks also, follow from the elongation of the neck to so great a distance in front of the anterior paddles. The total number of vertebræ in the entire column was, he observes, about ninety. From all these circumstances, Dr. Buckland infers that this animal, although of considerable size, had to seek its food as well as its safety, chiefly by means of artifice and concealment.

No less than sixteen species are enumerated by Professor Owen, —one described by Cuvier, two by Conybeare, and the rest by himself.

The period of existence of these enaliosaurians, extended through the whole of the oolitic range, including the lias and oolite of the Wealden and chalk formations. The chalk marl appears to be the most recent deposit where they have been found: they occur also in the gault.

Their name was legion. To say nothing of the bones which testify to their numbers, the petrified remains of their digested food put the question of their numerical force out of doubt.

"On the shore at Lyme Regis," says Dr. Buckland, "these coprolites are so abundant, that they lie like potatoes scattered in the ground; still more common are they in the lias of the Estuary of the Severn, where they are similarly disposed in strata of many miles in extent, and mixed so abundantly with teeth and rolled fragments of the bones of reptiles and fishes, as to show that this region, having been the bottom of an ancient sea, was for a long period the receptacle of the bones and fœcal remains of its inhabitants. The occurrence of coprolites is not, however, peculiar to the places just mentioned; they are found in greater or less abundance throughout the lias of England; they occur also in strata, of all ages, that contain the remains of carnivorous reptiles, and have been recognised in many and distant climates both of Europe and America."

The sea in which these extinct monsters gambolled, must have been not unlike that of the present day, especially in tropical climates. That the medium was capable of transmitting light in

the same manner that sea-water now does, might be safely inferred from such parts of the ocular apparatus of the fossil reptiles and fish as are still preserved to us, although the soft parts of the eye are, of course, absent. But in the *Trilobites*, those most ancient and extinct crustaceans which inhabited the bottom of the old seas, we have the eye itself petrified; and this, when compared with the similar compound eyes of the *Serolis* and *Limulus*, or King Crab, which now exist, proves, as Dr. Buckland has pointed out, that, the visual organs of both were fashioned for media essentially the same, and entirely dispels the dream of those geologists who believed that a turbid chaotic fluid holding in solution the precipitates from which the earth's crust was deposited, then prevailed.

In the same sea wherein the Ichthyosaur and Plesiosaur took their pastime, swam shoals of the finny tribe, now extinct and potted in their ancient mud,—among them the great Sauroid fishes, which must have almost disputed the mastery with some of the younger branches of the enaliosaurian families. Star-fishes, or *Ophiuri*, not unlike those which at present occur on our shores; crinoideans, or stone-lilies as the collectors term them; and extinct crustaceans, organized, however, in the same manner as existing species, were present; Belemnites and *Cornua Ammonis*, which have left no living representative, and *Orthocerata*, with numerous other *testaceous mollusca*, were there,—to say nothing of turtles; so that the ancient and respectable enaliosaurian corporation must have fared sumptuously; and, certainly the Ichthyosaurian branch of it had a more than alder-manic development of the mouth-and-stomach power.

The enaliosaurians, Professor Owen observes, are immediately connected with the crocodilian reptiles by the extinct and gigantic *Pliosaurus*, which is more closely allied to the true Saurians, and whose remains occur in the Kimmeridge and Oxford clays. The teeth are remarkable for their thickness and strength, and the cervical vertebræ for their shortness, the enormous jaws having been wielded by a neck, if neck it may be called, as short and strong as that of the whales.

But there were other sea-dragons besides the enaliosaurians, framed, however, upon a somewhat different principle, and according to the Lacertian type, such as the *Mosasaurus* or great animal of Maastricht.

This marine giant appears to have been most nearly allied to the Monitory lizards, as they are called, which now frequent the river-sides and marshy places in warm countries, and have had the credit, not very deservedly, we believe, of warning the traveller, by a peculiar whistling sound, of the approach of cro-

codiles and their congeners. Five feet is a great length for an existing Monitor to attain; but the Mosasaur must have reached twenty-five feet. The noble head in the Paris Museum, of which we have casts in this country, is four feet long: that of a large existing Monitor does not measure more than five inches in length.

The fossil was found in the calcareous freestone, near Maastricht, the most recent deposit of the cretaceous formation, in company with Ammonites, Belemnites, and other organic remains of the chalk formation in 1780, and for some time adorned that city. But it was a very sphinx's riddle to the learned. Some thought it was an enormous crocodile; others would have it to be very like a whale; but at last Camper suggested, and Cuvier afterwards confirmed its true zoological relations.

Fancy a marine Monitor of the length and bulk of a Grampus, with four paddles instead of legs, and a high and deep oar-like tail formed for propelling the animal through the wave, instead of the long and slender tail of the living species—and you have some notion of the Mosasaur.

Its jaws and teeth were tremendous. Nothing comparable to them can be imagined, excepting the ancient caricature, which may be known to some of our readers, representing a learned gentleman in his robes, not quite at his ease, between a pair of Saurian jaws, worthy of Munchausen's creation, and underwritten,

A LAWYER AND A SAWYER.

The rush of the Mosasaur through the water must have been most rapid; and its whole structure bespeaks an agent for keeping down the larger races of ancient fishes, more active and destructive than the great Ichthyosaur itself.

The Paris specimen belonged to the collection of Hoffman, from whom it was said to have been taken by the chapter of Maastricht, by virtue of some droits vested in them, and was given up by the Dean to the French army when it invested the city. Fortunate was the inhabitant whose dwelling lay near the place where the head of the Mosasaur was deposited: for the story goes, that to prevent the possibility of injury to a prize, which the besiegers were determined to possess, the French cannoniers were enjoined not to point their artillery towards that part of the city which held the remains of this grand Sea-Dragon.

ANCIENT AMPHIBIOUS AND TERRESTRIAL DRAGONS.

"Through many a dark and dreary vale
They passed, and many a region dolorous,
Rocks, caves, lakes, fens, bogs, dens, and shades of death."

PARADISE LOST.

If, with the eyes of the imagination aided by the lights afforded by the strata and the ancient inhabitants buried therein, we look back upon our earth when the forms of crocodilian reptiles first came upon it, we may picture to ourselves an oozy, spongy, reeky land, watered with wild rivers, and largely overspread by a vast expanse of lakes, on whose dreary, slimy banks gigantic crocodiles reposed amid enormous extinct bog-plants, or floated log-like in the fenny sunshine on their waters, while the silence of the desolate scene was broken by the clank of their monstrous jaws, as they ever and anon closed upon the bygone generations of fishes,—or by the growlings and explosions of the distant volcano.

With, perhaps, one exception—the crocodile of the Ganges namely—none of the ancient crocodilians exhibit specific identity with the alligators, crocodiles, and gavials now existing. And while they differ from the present races, the modifications of their osseous structure in which they so vary, as well as from each other, are much greater than any of those by which the skeletons of the existing species differ among themselves.

"Not only," says Professor Owen, "do the form and proportions of the peripheral parts, as of the jaws, the teeth, and the locomotive extremities vary, but the spine or central axis of the skeleton, offers modifications of the articular surfaces of the component vertebræ, which are quite unknown in the alligators, crocodiles, and gavials of the present epoch. In these existing species the anterior surface of the vertebral centrum is concave,

the posterior convex, except in the atlas and sacrum. But besides this mode of junction, Cuvier has recognised in the crocodilians of the secondary formations two other types of vertebral structure: in one of these the positions of the ball and socket are reversed; in the other, and more common modification, both the articular surfaces of the vertebra are flat or slightly concave. Remains of extinct crocodilians, exhibiting all the three systems of vertebral articulation, occur in English formations."

The professor then divides the extinct British species which, generally, agree with the existing crocodilians into two sections.

First, those with concavo-convex vertebræ: secondly, those with biconcave vertebræ.

In the first of these divisions he notices and describes a single species—*Crocodilus Spenceri*.

In the second he arranges and gives a description of the following: *Suchosaurus cultridens, Goniopholis crassidens, Teleosaurus Chapmanni, Teleosaurus cadomensis, Teleosaurus asthenodeirus, Steneosaurus rostro-minor, Poikilopleuron Bucklandi, Streptospondylus Cuvieri, Cetiosaurus brevis, Cetiosaurus brachyurus, Cetiosaurus medius*, and *Cetiosaurus longus*.

The destructive nature of these ancient inhabitants of the swamps which once occupied the place of the fair fields and cities of these islands, may be imagined from the multitude of weapons that armed their jaws.

It has been calculated that *Teleosaurus cadomensis* had one hundred and eighty, and *Teleosaurus Chapmanni* at least one hundred and forty teeth. The gavial of these degenerate days cannot boast of more than one hundred and twelve.

But terribly voracious as these and other crocodilians, (the enormous Sewalik crocodilian for example*) must have been, their efforts in keeping down the animals of the ancient Fauna of Britain could only have been feeble compared with those leviathans the *Cetiosauri*, some of which, according to Professor Owen's well-grounded statement, must have rivalled the modern great whales in bulk, and which he holds—with reason, we think—were strictly aquatic, and most probably marine in their habits. The larger alligator of the Ganges has been known in our own times to descend beyond the brackish water of the delta into the sea, though now frightened from its propriety by the steam-paddles that constantly vex that sacred river.

The evidence from which Professor Owen comes to this con-

* See the work of Dr. Falconer and Major Cautley above noticed, p. 321, note.

clusion rests on the sub-biconcave structure of the vertebræ, and the coarse, cancellous tissue of the long bones, which show no trace of a medullary cavity. In the great expanse of the coracoid and pubic bones, he tells us, as compared with the Teleosaurs and crocodiles, the gigantic saurians in question manifested their close affinity to the true Enaliosaurs which formed the principal subject of our last chapter; whilst their essential adherence to the crocodilian type is marked by the long bones of the extremities, especially the metatarsals, and above all, by the toes being terminated by strong claws.

The main organ of swimming is, the professor adds, shown by the strength and texture and vertical compression of the posterior caudal vertebræ, to have been a broad vertical tail; and the webbed feet, probably, were used only partially, in regulating the course of the swimmer, as in the puny *Amblyrhynchus* of the Gallapagos Islands.

But what is an *Amblyrhynchus?*

There are terrestrial and marine *Amblyrhynchi*; but it is the aquatic species *Amblyrhynchus cristatus*, to which the professor alludes. Here is its portrait drawn by the master hand of Darwin:—

"It lives exclusively on the rocky sea-beaches, and is never found, at least I never saw one, even ten yards inshore. It is a hideous-looking creature, of a dirty black colour, stupid and sluggish in its movements. The usual length of a full-grown one is about a yard, but there are some even four feet long: I have seen a large one which weighed twenty pounds. On the island of Albemarle, they seem to grow to a greater size than on any other. These lizards were occasionally seen some hundred yards from the shore, swimming about; and Captain Colnett in his voyage, says, 'they go out to sea in shoals to fish.' With respect to the object, I believe he is mistaken; but the fact stated on such good authority cannot be doubted. When in the water the animal swims with perfect ease and quickness, by a serpentine movement of its body and flattened tail, the legs, during this time, being motionless and closely collapsed on its sides. A seaman on board sank one with a heavy weight attached to it, thinking thus to kill it directly; but when, an hour afterwards, he drew up the line, the lizard was quite active. Their limbs and strong claws are admirably adapted for crawling over the rugged and fissured masses of lava which everywhere form the coast. In such situations, a group of six or seven of these hideous reptiles may oftentimes be seen on the black rocks, a few feet above the surf, basking in the sun with outstretched legs."

This extraordinary animal, notwithstanding its disgusting appearance, seems to be very harmless. Mr. Darwin found the

stomachs of all which he opened distended with minced sea-weed, a food for the procuring and comminution of which its teeth, unlike those of the crocodilians, are well adapted; nor does he recollect having observed this sea-weed in any quantity on the tidal rocks. He states his belief to be that it grows at the bottom at some little distance from the coast, and he observes that, if such be the case, the object of the animals in going out to sea is explained.

Another peculiarity in the habits of this creature is thus noticed by the same acute and accurate observer:

"The nature of this lizard's food, as well as the structure of its tail, and the certain fact of its having been seen voluntarily swimming out at sea, absolutely prove its aquatic habits; yet there is in this respect one strange anomaly; namely, that when frightened it will not enter the water. From this cause it is easy to drive the lizards down to any little point overhanging the sea, where they will sooner allow a person to catch hold of their tail than jump into the water. They do not seem to have any notion of biting; but when much frightened they squirt a drop of fluid from each nostril. One day I carried one to a deep pool left by the retiring tide, and threw it in several times as far as I was able. It invariably returned in a direct line to the spot where I stood. It swam near the bottom, with a very graceful and rapid movement, and occasionally aided itself over the uneven ground with its feet. As soon as it arrived near the margin, but still being under water, it either tried to conceal itself in the tufts of sea-weed, or it entered some crevice. As soon as it thought the danger was past, it crawled out on the dry rock, and shuffled away as quickly as it could."

Mr. Darwin goes on to state that he several times caught this same lizard, by driving it down to a point, and though possessed of such perfect powers of diving and swimming, nothing would induce it to enter the water: as often as he threw it in, it returned in the manner above described by him. He thinks that this singular piece of apparent stupidity may, perhaps be accounted for, by the circumstance that this reptile has no enemy whatever on shore, whereas at sea it must often fall a prey to sharks.

"Hence," adds Mr. Darwin, "probably urged by a fixed and hereditary instinct that the shore is its place of safety, whatever the emergency may be, it there takes refuge.*

And this innocuous herbivorous lizard is the only known example

* Journal of Researches into the Geology and Natural History of the various Countries visited by H.M.S. Beagle, under the command of Captain Fitz-Roy, R.N. from 1832 to 1836. By Charles Darwin, Esq., M.A., F.R.S., Secretary to the Geological Society, a work rich in vivid and accurate descriptions of nature.

of a saurian of decided marine habits at the present period. Strong is the contrast between the lacertian inhabitants of the world of to-day and those which peopled it in the age of reptiles to which we must now return, and inquire into the state of things when the crocodilian dynasty prevailed.

Remains of the extinct crocodilians may be traced from the early tertiary formations (the Eocene period of Lyell) down to the oolite and lias, in both of which strata they occur; and it is worthy of observation that the deviations from the existing genera and species increase in degree, as the beds containing those extinct species indicate periods more remote from the present time, as Professor Owen has pointed out.

Dr. Buckland in a few eloquent words has summed up the appointed task of these ancient agents in the police of nature. After observing that their occurrence in a fossil state is of high importance, inasmuch as it shows that whilst many forms of vertebrated animals have one after another been created and become extinct, during the successive geological changes of the surface of our globe, there are others which have survived all these changes and revolutions, and still retain the leading features under which they first appeared in our planet, he thus proceeds:

"If we look to the state of the earth, and the character of its population at the time when crocodilian forms were first added to the number of its inhabitants, we find that the highest class of living beings were reptiles, and that the only other vertebrated animals which then existed were fishes; the carnivorous reptiles at this early period must therefore have fed chiefly upon them, and if, in the existing family of crocodiles, there be any that are in a peculiar degree piscivorous, their form is that we should expect to find in those most ancient fossil genera, whose chief supply of food must have been derived from fishes. In the living sub-genera of the crocodilian family, we see the elongated and slender beak of the gavial of the Ganges, constructed to feed on fishes; whilst the shorter and stronger snout of the broad-nosed crocodiles and alligators give them the power of seizing and devouring quadrupeds that come to the banks of rivers in hot countries to drink. As there were scarcely any mammalia during the secondary periods, whilst the waters were abundantly stored with fishes, we might *à priori* expect that if any crocodilian forms had then existed, they would most nearly have resembled the modern gavial. And we have hitherto found only three genera which have elongated beaks, in formations anterior to and including the chalk; whilst true crocodiles, with a short and broad snout like that of the cayman and the alligator, appear for the first time in strata of the tertiary periods, in which the remains of mam-

malia abound. 'During these grand periods of lacustrine mammalia, in which but few of the present genera of terrestrial carnivora had been called into existence, the important office of controlling the excessive increase of the aquatic herbivora appears to have been consigned to the crocodiles, whose habits fitted them in a peculiar degree for such a service. Thus the past history of the crocodilian tribe presents another example of the well-regulated workings of a consistent plan in the economy of animated nature, under which each individual, whilst following its own instinct, and pursuing its own good, is instrumental in promoting the general welfare of the whole family of its contemporaries." *

Our attention is next arrested by the ancient terrestrial dragons,

THE DINOSAURIANS,†

as Professor Owen has aptly termed them; and although he has, upon the most satisfactory data, somewhat reduced the enormous dimensions originally assigned to them, "fearfully-great lizards" must they have been.

This tribe of gigantic crocodile-lizards of the dry land, as Professor Owen designates them with his usual accuracy, excepting that we may be permitted to express our doubts as to the land being very dry, are, he observes, as clearly distinguished from the modern terrestrial and amphibious saurians, as the opposite modifications for an aquatic life characterize the extinct Enaliosaurians or marine-lizards. To Professor Buckland and Dr. Mantell are those interested in the subject—and their number is, we are happy to say, no longer small—principally indebted for a knowledge of these wonderful and long-buried forms which once had dominion where Queen Victoria now reigns.

One of the most distinguishing characteristics of these great land-lizards is the possession of marrow-bones. The great bones of the extremities of the Enaliosaurians and ancient crocodilians were solid throughout, and the comparative weight, so far from being inconvenient in the medium through which they generally had to make their way, performed the office of ballast to steady them in and on the water, and prevent them, when on the surface, from exposing too much of their bodies, and being what the sailors call crank.

But in the enormous and dragon-like forms now under consideration, those oviparous quadrupeds, in short, whose progres-

* Bridgewater Treatise.

† Δεινὸς, terrible, fearfully great: σαῦρος, a lizard.

sion was to be performed on the land, and most probably in sandy or miry places and sloughs, a combination of lightness with strength was required, and the marrow-filled cylinder made the appropriate machinery complete.

Here is Professor Owen's general definition of his Dinosaurians :—

"This group, which includes at least three well-established genera of Saurians, is characterized by a large sacrum composed of five anchylosed vertebræ, of unusual construction, by the height and breadth and outward sculpturing of the neural arch of the dorsal vertebræ, by the twofold articulation of the ribs to the vertebræ,—viz., at the anterior part of the spine by a head and tubercle, and along the rest of the trunk by a tubercle attached to the transverse process only, by broad and sometimes complicated coracoids and long and slender clavicles, whereby crocodilian characters of the vertebral column are combined with a lacertian type of the pectoral arch; the dental organs also exhibit the same transitional or annectent characters in a greater or less degree. The bones of the extremities are of large proportional size for saurians; they are provided with large medullary cavities, and with well-developed and unusual processes, and are terminated by metacarpal, metatarsal, and phalangeal bones, which, with the exception of the ungual phalanges, more or less resemble those of the heavy pachydermal mammals, and attest, with the hollow long-bones, the terrestrial habits of the species." *

The most remarkable of these Dinosaurians hitherto discovered are the *Iguanodon*, the *Megalosaurus*, and the *Hylæosaurus*. We will commence with the

IGUANODON.

The habits of the existing members of the family of crocodiles are so well ascertained and familiarly known, that it would have been needless to go into details on that head; but the manners of the *Iguanas* or *Guanas* which are now living, and come nearest to the great extinct *Iguanodon*, are not so generally understood. A few words, therefore, explanatory of their form and mode of life, may not be uninteresting previous to a description of the old saurian.

The modern Guanas are lizards with long scaly bodies and tails, furnished with a depending, deep, thin, gular pouch, also covered with scales, and serrated on the anterior portion of the edge near

* Report on British Fossil Reptiles.

the chin. The head is somewhat pyramidal. The neck is a little compressed, and there are cuticular folds on its sides and on the trunk, the upper part of which is convex and rounded, and the under part flattened. The tail is very long and slender, slightly compressed on its sides. The rather long limbs are terminated by five toes with serrated edges and sharp claws, the three middle toes longer than the outside ones: the posterior toes are of greater length than those of the anterior extremities. A crest of elevated strongly-compressed scales, often curved in a posterior direction, arises behind the head, and is continued along the mesial line of the back to the end of the tail, diminishing as the extremity of the latter is approached, and producing a serrated appearance throughout its extent. This saw-like back, joined to the gular pouch and extraordinarily-shaped head, defended by large scaly plates of different forms, gives these animals a formidable aspect, especially when they have attained to their full growth, which frequently reaches five feet where they have not been disturbed, but does not often exceed that length.

The geographical distribution of the Guanas extends over a great part of South America and the West India islands. Although they occasionally eat eggs and insects in a wild state, and in captivity have been known to feed on the entrails of fowls, their ordinary food consists of buds, leaves, flowers, and fruits, for the cropping of which their numerous teeth, which may be compared to small lancets, terminating in broad blades with minutely serrated edges, are admirably adapted. As this diet leads the Guana to the trees, both form and colour conjoin to aid in securing its safety; the first enabling it to climb and stand firm on the branches, and the second going far towards concealing it in its leafy haunt. The long, slender, serrated, sharp-clawed toes and lengthened flexible tail, here come into play; and the green, bluish, or slaty hue of the upper part of the body, together with the yellowish green or brownish of the under parts, harmonize with its situation. Sometimes there are brown stripes or yellow-edged zigzags on the sides of the body; sometimes there is an oblique yellow line on the forepart of the shoulder; some are dotted with brown, the limbs of others are mottled with brown on a blackish ground, and the tail is generally annulated with alternate large brown and green or yellowish rings. These variations are, however, in strict keeping with its sylvan habits.

The Guanas take well to the water in their natural state, and swim with ease and tolerable rapidity. We have seen one in this country perform this feat more than once. The animal entered the pond belonging to the enclosure in which it was kept of its own accord: the motion was easy and graceful, and the

long flexible tail appeared to be the principal, if not the only instrument by whose oar-like but sinuous action progression was effected. We have also seen a Guana feeding on the leaves of the common kidney bean, to which plant it had resorted after refusing insects and other animal food. The colour of this Guana was a beautiful green. The leaves were assisted into the mouth by the fleshy tongue, and from the very short time they remained there must have been transmitted to the stomach but little comminuted by the teeth, whose services were evidently more applied to prehension and cropping than mastication.

These animals are oviparous: their eggs are round, with a thinner shell, or rather tegument, for it is tough not brittle, than that of those of the common poultry, but with a white and yolk resembling that of a hen's egg in flavour. Nor is this the only delicacy supplied by the uncouth-looking Guanas. They become very fat upon their wholesome diet, and are much sought after for their flesh, which is white as that of a chicken, and equal if not superior to it, when properly offered to the palate. The old authors confine their cookery to boiling and frying: thus Piso says that they love to feed on fruits and eggs, whence they derive much fat, and the whitish flesh "quæ elixa vel frixa inter delicias expetita, nec gallinaceis pullis cedit."

The same learned Amsterdam physician condescends to give a receipt for dressing their eggs in water, but without either oil or butter—"quæ addita aqua, non oleo aut butyro friguntur;" a method of frying which does not appear to have occurred to Dr. Kitchener. Modern refinement, however, soon discovered that Guana, to be eaten in perfection, should be presented in the savoury and delicate shape of a fricassee.

A few words further in illustration of the existing Guanas from eye-witnesses, whose works are not in the hands of every body.

Sir Hans Sloane gives the following account of an attempt to bring some of the reptiles of Jamaica to England:

"Though I foresaw the difficulties, yet I had an intention to try to bring with me [from Jamaica some uncommon creatures alive; such as a large yellow snake, seven feet long, a *Guana*, or great lizard, a crocodile, &c. I had the snake tamed by an Indian, whom it would follow, as a dog would his master, and after it was delivered to me I kept it in a large earthen jar, such as are for keeping the best water for the commanders of ships during their voyages, covering its mouth with two boards, and laying weights upon them. I had it fed every day by the guts and garbage of fowl, etc., put into the jar from the kitchen. Thus it liv'd for some time, when being weary of its confinement,

it shov'd asunder the two boards on the mouth of the jar, and got up to the top of a large house, wherein lay footmen and other domesticks of her Grace the Duchess of Albemarle, who being afraid to lie down in such company, shot my snake dead. It seem'd before this disaster to be very well pleas'd with its situation, being in a part of the house which was filled with rats, which are the most pleasing food for these sort of serpents. 'Tis upon this account that the European nations inhabiting the countries producing sugar do not molest these creatures, because they destroy the rats (which came originally from ships cast away on the coast, &c,) which multiply strangely there, and do infinite mischief to the sugar canes, not only eating them, but spoiling the juice of those they gnaw. The *Guana* us'd to feed on *calabash-pulp*, and liv'd very well aboard of the yacht, till one day when it was running along the gunnel of the vessel, a seaman frighted it, and it leap'd overboard and was drown'd."*

Catesby describes the *Guana* (*Lacerta Iguana*, Linn.) as a kind of lizard somewhat resembling the crocodile or alligator in shape, but having a shorter head and a serrated crest on the ridge of the back, extending from behind its head to the middle of the tail: they are, he says, of various sizes, from two to five feet in length.

"Their mouths," continues Catesby, "are furnished with exceeding small teeth, but their jaws are armed with a bony beak, with which they bite with great strength. They inhabit warm countries only, and are rarely to be met with anywhere north or south of the Tropicks. Many of the Bahama islands abound with them. They nestle in hollow rocks and trees: their eggs have not a hard shell like the eggs of alligators, but a skin only, like those of turtle, and are esteemed good food: they lay a great number of them at a time on the earth, which are there hatch'd by the sun's heat. These Guanas are a great part of the subsistence of the inhabitants of the Bahama island, for which purpose they visit many of the remote Bays and Islands, in their sloops to catch them; which they do by dogs trained for that purpose, which are so dextrous as not often to kill them; which, if they do, they serve only for present spending; if otherwise, they sew up their mouths to prevent their biting, and put them into the hold of their sloop till they have catch'd a sufficient number; which they either carry alive for sale to Carolina, or salt and barrel up for the use of their families at home. These Guanas feed wholly on vegetables and fruit, particularly on a kind of fungus, growing at the roots of trees. and of this and others of

* "Jamaica." Vol. II.

the Anona kind. Their flesh is easy of digestion, delicate, and well tasted: they are sometimes roasted, but the more common way is to boil them, taking out the leaves of fat, which they melt and clarify; this they put into a calabash or dish, into which they dip the flesh of the *Guana* as they eat it. It is remarkable that this fat, which adheres to the inside of the abdomen, imbibes the colour of the fruit they last eat, which I have frequently seen tinged with pale red, yellow, and sometimes of a purple colour, which last was from eating the *Prunus Maritima*, which fruit at the same time I took out of them. Though they are not amphibious, they are said to keep under water above an hour: when they swim, they use not their feet, but clap them close to their body, and guide themselves with their tails: they swallow all they eat whole. They cannot run fast; their holes being a greater security to them than their heels. They are so impatient of cold that they rarely appear out of their holes but when the sun shines."*

The "Anona" to which Catesby alludes, and which is figured in the plate opposite to his description, is the *Anona Glabra* of Linnæus, the Sour-sop (or Sowr-sop, as Sloane writes it) of the colonists. Catesby says of it that it is an eatable fruit, very sweet, but somewhat insipid; "yet," he adds, "it is the food of guanas and other wild creatures." Sloane has this passage respecting the fruit of this tree—"an anonymous Portugal observed this fruit in Brasile. Purchas saith it tastes like a musty melon, and is shap'd like an ox's heart." The simile as to the shape is not bad.

Dr. Patrick Browne, in his "History of Jamaica," speaks of the Guana as a native of most parts of America, and generally an inhabitant of the woods; but remarks that like others of the tribe it lives a very considerable time without food, and changes its colour with the weather or the native moisture of its place of residence.

"I have kept," observes our author, "a grown *Guana* about the house for more than two months; it was very fierce and ill-natured at the beginning, but after some days it grew more tame, and would at length pass the greatest part of the day upon the bed or couch, but it went out always at night. I have never observed it to eat any thing, except what imperceptible particles it had lapped up in the air; for it frequently threw out its forked tongue, like the chameleon, as it walked along. The flesh of this creature is liked by many people, and frequently served up in fricassees at their tables, in which state they are often

preferred to the best fowls. The *Guana* may be easily tamed while young, and is both an innocent and beautiful creature in that state."

If the worthy doctor had spared his poor Guana a morsel of his mango or custard-apple, or even thrown it a few succulent leaves, it need not have starved; but he seems to have thought that it lived upon the chameleon's dish.

Now turn we to its ancient prototype, the *Iguanodon*, whose teeth and remains were discovered by Dr. Mantell in the Weald, where the climate, in the Age of Reptiles, far from being temperate, must have been of a tropical character, from the evidences exhumed from its strata.

The thigh-bone of this monster was larger than that of any existing elephant. Indeed the size of its bones took its first describers so much by surprise that we have heard "a tail as long as St. Martin's steeple" ascribed to it or some of its fossil brethren, in the enthusiastic eloquence of the moment—after dinner. Nay, seventy-five, eighty, and even one hundred feet have been deliberately stated as the length of the Iguanodon, from a comparison of its teeth, clavicle, femur, and claw-bone with those of the Guana at present in existence.

Now, as Professor Owen remarks, if the comparison had been founded on the claw-bone from Horsham, instead of that compared by Dr. Mantell, *two hundred feet* as the total length of the Iguanodon would have been the result; for the Horsham bone exceeds the corresponding phalanx by forty times. Upon measurements and calculations, however, that appear to be incontrovertible, the total length of the Iguanodon—which differs in some parts of its structure, the articulation of the ribs for example, from that of the Guana—is set down by Professor Owen at twenty-eight feet; and when its enormous bulk and strength is recollected, this ancient herbivorous dragon must have been of a size to have fitly supplied the commissariat of the giants when they warred against Jove.

The teeth with which this monster cut out its huge morsels from the tough *Clathrariæ*, and other similar rigid plants which are found entombed with its remains, are instruments whose adaptation to the work which they had to perform beautifully shines out upon examination.

Professor Owen justly observes that the teeth of the *Iguanodon*, although they resemble very closely those of the *Iguana*, do not present an exact magnified image of them, but differ in the greater relative thickness of the crown, its more complicated external surface, and still more essentially in a modification of the internal structure, by which the Iguanodon deviated from every known

reptile. The structure of the teeth is fully described by the Professor both from ordinary and microscopical examination in his "Report;" but our limits will not permit us to go into the details, notwithstanding their great interest. We can only here state, that in its first or incisive condition, the tooth presented a sharp serrated edge, extending down each side from the point to the broad portion of the body of the tooth; and as this was necessarily liable to wear away by use, a provision was made to convert it into a molar or grinding tooth, till it was worn down so as to become no longer available, when its place was supplied by a new tooth. To preserve a cutting edge, there was a partial coating of enamel, and to secure the wearing away of the tooth in a more regularly oblique plane, the dentine is rendered softer as it recedes from the enamelled edge, by the simple contrivance of arresting the calcifying progress along certain tracts of the inner wall of the tooth. When attrition had exhausted the enamel, and the tooth became limited to its grinding function, the ossified remnants of the pulp came into operation to add to its molar efficiency.

Even before Professor Owen had thus laid open the internal structure of these admirable plant-cutting and plant-crushing instruments, Professor Buckland was struck, from mere external examination, with the exquisite design manifested in their conformation, which he describes with his wonted felicity; and he shows how, while the tooth was gradually diminishing above, a simultaneous absorption of the root went on below, caused by the pressure of a new tooth rising to replace the old one, until, by this continual consumption at both extremities, the middle portion was reduced to a hollow stump, which fell from the jaw to make room for a more efficient successor. In this last stage, he observes, the form of the tooth had entirely changed, and the crown had become flat, like that of worn-out human incisors, and capable of performing imperfect mastication after the cutting powers had diminished.

"In this curious piece of animal mechanism," says Dr. Buckland, in concluding his interesting chapter on the Iguanodon, "we find a varied adjustment of all parts and proportions of the tooth, to the exercise of peculiar functions; attended by compensations adapted to shifting conditions of the instrument, during different stages of its consumption. And we must estimate the works of nature by a different standard from that which we apply to the productions of human art, if we can view such examples of mechanical contrivance united with so much economy of expenditure, and with such anticipated adaptations to varying conditions in their application, without feeling a profound convic-

tion that all this adjustment has resulted from design and high intelligence."*

Such was the Iguanodon which once basked in the tropical jungles of Sussex, amid extinct plants that formed its shelter and its food. Trees there were none for such a giant to climb, and indeed the caudal vertebræ show, as Professor Owen points out, that the tail of the Iguanodon was relatively shorter than that of the Iguana, whilst the size and structure of the sacrum, thigh-bone, and tibia further indicate the adaptation of the great herbivorous saurian for terrestrial life. Neither the invention of the herald who drew the supporters of the shield of the city of London, ready to attack fiercely any reformer who approaches the cockney Goshen, nor even the imagination of Retzsch, can match this bulky monster. Truth *is* stranger than fiction.†

HYLÆOSAURUS.

Another great dragon or lizard of the Weald, to which Dr. Mantell assigns the above name, was discovered by that indefatigable palæontologist in Tilgate Forest. It was, at first, supposed to have been, like the Iguanadon, herbivorous; but the observations of Professor Owen go to prove that the jaws contained a series of true sockets, and were fitted for the thecodont or socketed mode of attachment of the teeth, and thus agreed with the carnivorous *Megalosaurus*. There is some doubt, moreover, as to the enormous dermal fringe which was supposed to have extended along the back of the animal, analogous to that which is seen on the modern *Cyclura* lizard, for reasons given by Professor Owen in his *Report;* but the existence of dermal scutes in the Hylæosaur analogous to those in the recent crocodiles, rests upon unequivocal testimony, and some of them may be seen still adhering to the caudal vertebræ, decreasing in size as they approach the end of the tail. The diameter of the largest of these scutes which must have studded the skin of this great reptile, was found to be not more than three inches; that of the smallest was one inch.

But the most formidable, as well as the most remarkable of these Old World Terrestrial Dragons, must have been the highly carnivorous

MEGALOSAURUS.

To Dr. Buckland, who first founded this extraordinary genus

* Bridgewater Treatise.

† The horn which was supposed to have projected from the snout of the Iguanodon is one of its claw-bones, and so Professor Owen has noticed it.

on specimens discovered in the oolitic slate of Stonesfield, near Oxford, we are indebted for this, in every sense of the word, great addition to the extinct Fauna of these realms. For, although the length of from forty to fifty feet assigned to this ancient and truculent dragon by Cuvier and others, has shrunk before the accurate measurements and calculations of Professor Owen to a total length of thirty feet, its gigantic bones give evidence of an enormous bulk which must have realized the "bely greater than any tonne" of the old legend; whilst its terrible jaws and trenchant teeth, which partook of the structure of those of the crocodile and monitor, attest its great destructive power.

As Dr. Mantell found the bones of the Megalosaurus in the Wealden fresh-water formation of Tilgate Forest, this slashing destroyer may have helped to keep down the great herbivorous Iguanodons, as well as the smaller reptiles, such as crocodiles and tortoises, whose remains are found embedded with it. Dr. Buckland also suggests that it may have taken to the water in pursuit of *Plesiosauri* and fishes; and infers from the localities whence it has been disinterred, that it existed during the deposition of the entire series of oolitic strata. The Iguanodon would hardly have succumbed to the Megolasaur without resistance, and the fight between the herbivorous and carnivorus Titans must have been a tremendous tug of war.

Professor Owen observes, that the most authentic remains of the Megalosaur prove it to have been closely related to the Lacertian division of the Saurian order; but that the teeth, the vertebræ, and some of the bones of the extremities, indicate its affinities to the crocodilian group; and that all these parts manifest more or less strongly the peculiar characters of its own remarkable family. In the instructive and characteristic portion of the lower jaw, he remarks, the sockets, like the teeth, are compressed, and are separated by complete partitions; but they are so much wider than the teeth as to suggest the existence of a greater portion of ligamentous gum at the upper part of the alveolar tract in the recent animal than in the crocodiles. There is, he remarks, a slight groove and ridge along the inner side of the sockets, and it is at this groove, at the interspace of each triangular plate, that the points of the new teeth, that are to supply the place of the old ones broken or blunted by slaughter, protrude.

The crowns of these destructive implements were compressed, conical, and pointed, double-edged and serrated on both the anterior and posterior edges. Straight at their first protrusion, they afterwards became slightly curved or sabre-shaped as they grew, and were covered with a fine polished enamel. In the dentition, the Megalosaur approaches nearest, in Professor Owen's opinion,

to the Varanian family, which at pretent includes the largest and most carnivorous species of lizard properly so called.

Now let us hear Dr. Buckland on the teeth. He points out that in their structure we find a combination of mechanical contrivances, analogous to those which are adopted in the construction of the knife, the sabre, and the saw.

When first protruded above the gum, the apex of each tooth presented a double-cutting edge of serrated enamel. In this stage its position and line of action were nearly vertical, and its form like that of the two-edged point of a sabre, cutting equally on each side. As the tooth advanced in growth, it became curved backwards in the form of a pruning-knife, and the edge of serrated enamel was continued downwards to the base of the inner and cutting side of the tooth; whilst, on the outer side, a similar edge descended, but to a short distance from the point, and the convex portion of the tooth became blunt and thick, as the back of a knife is made thick for the purpose of producing strength. The strength of the tooth was further increased by the expansion of its sides. Had the serrature continued along the whole of the blunt and convex portion of the tooth, it would, in this position, have possessed no useful cutting power; it ceased precisely at the point beyond which it could no longer be effective. In a tooth thus formed for cutting along its concave edge, each movement of the jaw combined the power of the knife and saw; whilst the apex, in making the first incision, acted like the two-edged point of a sabre. The backward curvature of the full-grown teeth, enabled them to retain, like barbs, the prey which they had penetrated. In these adaptations we see contrivances, which human ingenuity has also adopted, in the preparations of various instruments of art.*

But, it may be asked, how is this ingenuity in the formation of cruel instruments expressly formed for inflicting pain, and dealing destruction and death, reconcilable with the mercy attributed to the Creator, who manifests in the structure of the lowest of his creatures the best adaptations to its wants and pleasures? The querist will be best answered by the thirteenth chapter of Dr. Buckland's "Bridgewater Treatise," wherein he proposes to show that the aggregate of animal enjoyment is increased, and that of pain diminished by the existence of carnivorous races. In reading that eloquent chapter, let him keep these points steadily in view; first, that it was written with reference to the lower animals; next, that man is the only animal that knows he is to die; thirdly, that there is room in the world for only a certain

* Bridgewater Treatise.

amount of enjoyable animal existence; and he will find that what at first sight appears to be "a scene of perpetual warfare and incessant carnage," is in reality a system of the most enlarged benevolence. We can only find room for the following paragraph:

"The law of universal mortality being the established condition on which it has pleased the Creator to give being to every creature upon earth, it is a dispensation of kindness to make the end of life to each individual as easy as possible. The most easy death is, proverbially, that which is the least expected; and though, for moral reasons peculiar to our own species, we deprecate the *sudden* termination of our mortal life; yet, in the case of every inferior animal, such a termination of existence is obviously the most desirable. The pains of sickness and decrepitude of age are the usual precursors of death, resulting from gradual decay. These in the human race alone, are susceptible of alleviation from internal sources of hope and consolation, and give exercise to some of the highest charities and most tender sympathies of humanity. But, throughout the whole creation of inferior animals, no such sympathies exist; there is no affection or regard for the feeble and aged; no alleviating care to relieve the sick; and the extension of life through lingering stages of decay and of old age, would, to each individual, be a scene of protracted misery. Under such a system, the natural world would present a mass of daily suffering, bearing a large proportion to the total amount of animal enjoyment. By the existing dispensations of sudden destruction and rapid succession, the feeble and disabled are speedily relieved from suffering, and the world is at all times crowded with myriads of sentient and happy beings; and though to many individuals their allotted share of life is often short, it is usually a period of uninterrupted gratification; whilst the momentary pain of sudden and unexpected death is an evil infinitely small, in comparison with the enjoyments of which it is the termination."

This being granted, the more efficient the weapon of destruction is, the less will the suffering of the individual be. The wish of the honest host in "Marmion" was, after all, not an uncharitable one:

> "Gramercy, gentle southern squire,
> And if thou com'st among the rest,
> With Scottish broad sword to be blest,
> Sharp be the brand and sure the blow,
> And short the pang to undergo."

How many of our noble sufferers in those dark days, when the laws may truly be said to have been written in blood, have felt the edge of the axe that was to dismiss them to their account? One

of the last who resorted to this test was Lord Balmerino; but in his case, it unexpectedly brought additional suffering; for the unaffected gallant bearing of the man completely unnerved the executioner, and a scene ensued which every lover of his country would wish to veil. That scene took place one hundred years ago, wanting three. What changes have since taken place in the spirit of our punishment—how much butchery has been swept away, never again, we trust, to defile this land.

October, 1843.

ANCIENT FLYING DRAGONS.

"Their earth is gone for ever—
So changed by its convulsion, they would not
Be conscious to a single present spot."

BYRON.

In the remote ages of the earth, when the forms which we have already attempted to lay before our readers were among the highest of created beings, the reptilian appears to have been nature's pet type, and she seems to have revelled in modifying it for progression in the sea, by land and water, on land, and through the air—

—"To fly, to swim,"

at her "strong bidding."

But before we enter upon the description of the *Pterosauria* or winged Saurians, it will be necessary briefly to notice some other old dragon forms, of whose relics, although few and rare, sufficient remain to show to what class they belonged.

Such, in the natural order *Lacertilia*, are the teeth of the *Leiodon* from the chalk of Norfolk, making the nearest approach to those of the Mosasaur; and the small *Raphiosaurus* of the chalk formations near Cambridge, affording another instance of the "procœlian type of vertebræ, or those with the anterior cup and posterior ball. It is worthy of remark that Professor Owen, to whom geologists are so much indebted for the notice of these genera, had not met with any instance of a reptile agreeing with the existing species in this structure below the chalk.

To the same order is to be referred a Pleurodont lizard from the Eocence sand underlying the Red Crag at Kyson or Kingston, in Suffolk, about the size of a Guana; a small Scincoid lizard from the Stonesfield Oolite; and the rare *Rhynchosaurus* from the new red sandstone near Shrewsbury.

Professor Owen observes that the general aspect of the skull in this last form differs from that of existing Lacertians, and

resembles that of a bird or a turtle, which resemblance is increased by the apparent absence of teeth. The intermaxillary bones, moreover, are double, as in crocodiles and chelonians; but, with this exception, all the essential characters of the cranium are those of the lizard. Of this small but interesting Saurian the same palæontologist further remarks that there are few genera of extinct reptiles with regard to which it is more desirable to obtain the means of determining the precise modifications of the locomotive extremities, than in the Rhynchosaur. The fortunate preservation of the skull, he adds, has brought to light modifications of the Lacertian structure, leading towards chelonians or turtles and birds, which before were unknown; while the vertebræ likewise exhibit very interesting deviations from the Lacertian type.

Then there were certain *Thecodonts;* and as the terms "Thecodont," and "Pleurodont," may not be familiar to some of our friends, we shall endeavour to explain them shortly to those who may desire the information.

A pleurodont lizard, then, is one whose teeth are attached to the bottom of an alveolar groove, and supported by the side-wall of that groove; but Professor Owen has so luminously and concisely defined the Acrodont, Pleurodont, and Thecodont Saurians, that we shall give the definition in his own words.

"Among the inferior or squamate saurians there are two leading modifications in the mode of attachment of the teeth, the base of which may be either anchylosed to the summit of an alveolar ridge, or to the bottom of an alveolar groove, and supported by the lateral wall. These modifications are indicated respectively by the terms 'acrodont' and 'pleurodont.' A third mode of fixation is presented by some extinct Saurians, which in other parts of their organization adhere to the squamate or Lacertine division of the order, the teeth being implanted in sockets, either loosely or confluent with the loose walls of the cavity; these I have termed the 'thecodont' Lacertians: the most ancient of all Saurians belong to this group." *

To this tribe belongs the *Thecodontosaurus* of Dr. Riley and Mr. Stutchbury, from the dolomitic conglomerate of Redland near Bristol; the *Palæosaurus* of the same zoologists from the same formation; and the *Cladyodon* of Professor Owen, who, among the *sauria incertæ sedis*, places the large *Polyptychodon* from the Kentish rag-quarries (lower green sand) near Maidstone, whose teeth—one of which, in the possession of Mr. Benstead in that town, is three inches long, and one inch four lines across the base,—in size and general form resemble those of the great sauroid fish, *Hypsodon*, of Agassiz.

* Report on British Fossil Reptiles.

Here also must be arranged an unnamed gigantic fossil saurian from the lower green-sand at Hythe, whose remains were discovered by Mr. Mackeson of that place. This Saurian, in Professor Owen's opinion, was marine; but most probably of the crocodilian order; and as enormous in its dimensions as the *Polyptychodon* and the *Cetiosaurus*. The last thecodont saurian noticed by Professor Owen is his genus *Rysosteus*, from the bone-bed of Aust Passage, near Bristol, and from that of West Cliff on the Severn, eight miles from Gloucester.

We now turn our attention to the

PTEROSAURIANS

comprised in the genus *Pterodactylus* of Cuvier, of which he truly says that of all the forms whose ancient existence has been revealed to us, these flying reptiles are incontestibly the most extraordinary, and such as, if now living, would appear most at variance with any animal now endowed with life.

For these ancient flying dragons did not sustain themselves in the air by means of their ribs, like those which now skim from tree to tree in India; nor by a wing like that of a bird; no, nor by one like that of a bat; but by a membrane, upheld principally on a very elongated finger, whilst the other fingers preserved their ordinary dimensions and their claws. With this extent of wing the Pterodactyle presented the likeness of the bill of a bird, placed upon a long neck. Well may Cuvier declare that to those who had not followed out the details of its structure, a representation of the animal as it formerly breathed and moved would appear more like the offspring of a disordered imagination than of the ordinary powers of nature.

But a word or two will be expected relative to existing flying dragons.

He who would read of the dragons of "Mooren-Landt," and of the audacity of Juba in writing that dragons have a feathered crest upon their head, when no man could be brought forward able to state with truth that he had ever seen a dragon with a plumed crest, although they have an ornament on their heads;—how they congregate, linking themselves together in groups of four or five, erect their heads to catch the gale, and so swim or sail across the sea to Arabia, a ghastly crew, for improved change of pasture;—how the herb *Balis* will restore a man poisoned by a dragon, and even bring a dead dragon to life; with much more dragon-lore, may consult Pliny's Natural History, and a curious

Dutch work published at Amsterdam in 1662,* where many of the ancient stories are collected, and very interesting zoological information of more modern date is to be found. In this book are figures of both the fabulous and existing flying dragons, the first under the name of *Draeek* and the second under that of *Boomdraeck*.

Bontius, whose observations were collected and published by Piso in his folio work "De Indiæ utriusque re naturali et medica" (1658), was one of the first to reduce the fabulous accounts of dragons to something like their proper dimensions. Here the *Draco volans* of Linnæus is figured in a rough cut, bearing no bad resemblance, considering the state of wood engraving at the time, to the animal. The chapter is headed

Lacertus volans, seu Draconculus alatus
Aera pervolitans junxisse Medea Dracones
Dicitur: è Java num tulit has volucres?

and we are informed that this is the dragon described by Belon, noticed in a former chapter of this sketch, but that Bontius had found it necessary to describe it a little more accurately, inasmuch as he had seen it not only dead, but alive "here in Java," where he practised physic.

He observes that Belon has figured this "insect" as a biped, whereas it is a quadruped, and he proceeds to give a good account of its form, colours, and habits, and to relate how these dragons pass "cum stridore" from tree to tree, when the distance is as much as twenty and even thirty paces, as the flying fishes, called aquatic swallows by Gesner, are said to raise themselves from the water for a short time. Bontius adds, that he has not ascertained whether these lizards are poisonous, but that the Javanese deny that they are so, and handle them like other lizards, with impunity. Their food, he says, consists of flies, ants, and other small insects; and he notices them as frequent in the woods of Java, where they become a prey to "greater serpents," quoting the well-known and bitterly true "Homo homini Lupus," of Plautus, as a justification of the proceeding.

It was the old belief, that whenever a serpent devoured a serpent, a dragon was produced; nay, that this was the only operation by which a serpent could be promoted to dragon's estate.

We have in a former chapter observed, that no collection of curiosities was anciently considered worthy of much attention, if it did not include a dragon; and as even the rudest people

* C. Plinii Secundi des wiidt-vermaerden Natuurkondigers, &c. &c.

quickly perceive what collecting travellers want, and as speedily furnish them with their *desiderata*, it is no subject for wonder that the more civilized fabricators of rarities exercised their ingenuity in supplying the cabinets of the curious with the much-coveted monster.

If any one wishes to see what the celebrated Hamburg dragon was like, he will find it figured by Seba (1734) in the hundred and second plate of his first volume. It was seven-headed, biped, and wingless—in short, purporting to be one of the hydræ to which we have before alluded; and it may not be uninteresting to some of our readers to learn what Seba says of it.

Seba then calls the attention of *his* readers to the large engraving which extends across two folio pages, as that of an animal which *passes* for a serpent with seven heads. He states that a stranger who did him the honour to visit his cabinet of natural curiosities, first gave him a figure of it, saying, that he had seen the animal at Hamburg—that it resembled a serpent with seven uplifted heads, each having the mouth open, and armed with great and small teeth—that it had only two feet and a long tail—so that, although it passed for a serpent with seven heads, it approached nearer to a dragon than a serpent.

"I avow," remarks Seba, "that this story appeared to me very paradoxical, and to be nearer to fable than truth."

But Seba goes on to state that M. F. Eibsen, a minister of the gospel at Wursten, in the duchy of Breme, coming one day to see his cabinet, gave him the same account of this Hydra, and promised to procure for him a drawing of the animal, which the clergyman could easily effect, as he was connected with MM. Dryern and Hambel, the Hamburg merchants, who were the possessors of it. He said that it had first belonged to Count Koningsmarck; and that, after his death, it had been inherited by Count Leeuwenhaupt.

Seba then relates that, as he had heard that this specimen was for sale for ten thousand florins—a statement which M. Eibsen confirmed—the magnitude of the sum reawakened his desire to have a faithful portrait of it. M. Eibsen kept his word, and obtained for Seba the copy which he wished for.

Seba, however, still incredulous, wrote to his friend M. John Frederick Natorp, of Hamburg, who was very curious in natural history, had seen this same Hydra, and assured Seba that it was no work of art, but truly that of Nature. This friend, at Seba's request, sent him a drawing of the natural size, very well coloured; and from this last, Seba's engraving was made.

Now for Seba's description of the monster:

It was of a bay-brown colour, shaded with ashy gray. Its

back was uneven and rugged. On each of its sides were six large tubercles, which were oblong, and hard as horn, under which row seven other tubercles, which were round, and of the same nature, were arranged along the sides from the feet to the tail. The skin of the whole of the trunk, as well as that of the seven heads, was without any scales, and of a colour approaching to chestnut, and marbled. The seven necks were encircled in front, as it were, by rings placed across them. All the seven mouths were equally open, and armed with teeth like those of a lion. Its long tail was entirely covered with rhomboidal scales. Each foot—there were but two—terminated in four toes, each toe being furnished with a long and pointed claw.

There can be little doubt that the publication of this figure in such a work as that of Seba, who gives two very fair representations of the *Draco volans* now existing—one on the same page with the Hydra—must have added greatly to the fame of the dragon possessed by MM. Dryern and Hambel. Still, no collector, even in that Tulipomaniacal country, seems to have screwed his courage to their price.

One fine day, in walked a quiet foreigner, with a sparkling eye, to whom the precious specimen was shown with the half-concealed exultation of those who are wrapped in the comfortable certainty that they possess "a gem" which is unique.

The foreigner was Linnæus, who was asked "What he thought of that?"

The great naturalist carefully examined the dragon, and appeared to the surrounding circle to be lost in admiration—for the question was repeated. He declared that it *was* wonderful, very, —and a most ingenious combination of snake-skins, teeth of weasels, claws of birds, etc. etc. etc.

The owners were probably saved by their wrath and fond credulity, from dying on the spot, and by their wholesome dread of a public sudden death, from executing summary vengeance on the acute Swede. Clinging, however, to the belief that their lion, their treasure, their time-honoured Hydra was genuine, Linnæus was threatened with a prosecution for injuring their property; and it is said that he left Hamburg as soon as he could, to avoid their ire.

It must have been a great shock and a sore trial:—a real dragon—all others of course counterfeits—worth ten thousand florins, changed in a moment at the keen glance of the Knight of the Polar Star, to a worthless, fraudulent thing "of shreds and patches."

This sort of ingenuity, no longer finding employment in the creation of dragons, has, of late, solaced itself in the manufacture of mermaids.

But to return to our real, existing flying dragons.

The harmless lizards of the genus *Draco* are insignificant in size, not being more than nine or ten inches, or a foot in length, the tail being long in proportion to the body. The aspect of the head is singular, and beneath the throat is a large pouch; so that Cuvier gives a good notion of the animal when he remarks, that the dragons are endowed with the head and teeth of the *Stellio* lizards, and the scales and gular pouch of the Iguanas. The neck is not large, and the body and limbs are rather slender. The four feet are each furnished with five toes, armed with sharp nails. The species vary in colour: that of *Draco volans* is pale blue, or bluish gray, with several dusky-waved markings above. The wings are bordered with white, and spotted with black, deep brown, and white, so as to produce a not inelegant pattern. Beneath, this dragon is pale or whitish brown.

The ribs in the ordinary serpents, especially in the boas and pythons, are so articulated as to become active instruments of terrestrial progression. In the existing dragons, this part of the skeleton is also made subservient to locomotion; but in a very different way. Instead of being numerous and comparatively stout and curved, they are few in number, very much elongated, and slender, presenting, when advanced to a right angle with the spine, a graduated appearance, the first being the longest, and the last very much shorter. On these ribs, as on the whalebones of an umbrella, the membranes of the wings are sustained; and when the dragon wishes to put them in action, the muscles bring the ribs forward and unfurl the wings, so to speak, which then become expanded, and uphold the dragon in the air as it proceeds from tree to tree, or whither its inclination leads it.

There appears to be scarcely any of that motion with which the wing of the bird or the bat is endowed, for the purpose of progression, by beating the air with a succession of strokes, if any at all, so that the apparatus may be considered as merely a natural parachute, expansible at the will of the animal.

Very different were the flying dragons of the Age of Reptiles; nor can we be surprised that an animal like the Pterodactyle, whose remains presented such a variety of contradictions, should have caused some difference of opinions among naturalists, before the penetrating eye of Cuvier cleared away the clouds that surrounded it, and reduced the darkness and apparent confusion to light and harmony.

Collini, a Florentine man of letters, director of the cabinet of the Elector Palatine, at Manheim, and well known from his memoirs of Voltaire, to whom he was for some time attached,

first drew public attention to the large and long-beaked species,* which had been found in the lithographic Jurassic limestone of Aichstadt, a formation abounding in animal exuviæ, such as those of fishes, crustaceans, insects, and mollusks. These remains appeared to Collini to belong to an animal so heteroclite, that he long hesitated under what class to arrange it. He justly declared that it was neither a bird nor a bat, doubted whether it might not be an amphibian, and finished by the conclusion that its place was to be sought among marine animals.

Professor Hermann of Strasburg was of opinion that it was a mammiferous animal, and, after long consideration, produced a restoration of the creature, with a hairy covering, believing that he had fixed its position as an intermediate species between the bats and the birds. He was greatly strengthened in this belief by Sömmering, an authority of no small weight, from the deserved respect in which the latter was held, and who, notwithstanding the appearance of Cuvier's memoir—another wonderful instance of the acuteness of that great man, for he had never seen the specimen, and Collini's figure and description were his only materials—arranged the form among the mammals, in the vicinity of the bats. Now Sömmering *had* seen the specimen, and Cuvier's remarks indicating its true and reptilian character, reached him just as he was going to press with his dissertation, which was read to the academy at Munich in 1810; but instead of opening his eyes at the just reasoning of Cuvier, Sömmering set himself to oppose, and vainly attempt to destroy the arguments of the great French zoologist.

Blumenbach, in 1807, had referred the puzzling fossil to the aquatic web-footed birds, with less reason even than that which led Sömmering to consider the animal mammiferous; for, as Cuvier succinctly observes, the teeth on the bill of the Mergansers or Goosanders do not go beyond the horny sheath, and are not to be seen on the bone of the bill.

Cuvier returned to the charge, recapitulating more explicitly his arguments in favour of the reptilian condition of the animal, and had now an ally in Oken, who had inspected the fossil, and published his memoir in the "Isis" of 1819, explaining *his* reasons for concluding that it was a reptile.

Not to weary our readers with the controversy, it will be sufficient to state that Cuvier, as usual, was right, and that not the most distant doubt is now entertained that the Pterodactyle was a reptile. Professor Owen well observes that the term *Ornithocephalus*, originally imposed by Sömmering on the genus *Pterodactylus* of Cuvier, the type of the distinct order of *Pterosauria*,

* Pterodactylus longirostris

would be much more applicable to the *Rhynchosaurus*; for although a more striking approach to the class of birds is made by the pectoral extremity, which endowed the Pterodactyle with the power of flight, it is, the professor observes, precisely in the structure of the cranium that it adheres most closely to the Saurian type of structure.

Dr. Buckland accounts for the discordance of opinion above noticed, respecting the nature of a creature whose fossil skeleton was almost entire, by alluding to the presence of characters in it, apparently belonging to each of the three classes to which it was referred. There were the birdlike neck and head, the wing approaching in form and proportion to that of the bat, and a body and tail approximating to that of the mammal.

"These characters," says Dr. Buckland, "connected with the small skull, as is usual among reptiles, and a beak furnished with not less than sixty pointed teeth, presented a combination of apparent anomalies which it was reserved for the genius of Cuvier to reconcile. In his hands, this apparently monstrous production of the ancient world, has been converted into one of the most beautiful examples ever afforded by comparative anatomy of the harmony that pervades all nature in the adaptation of the same parts of the animal frame, to infinitely varied conditions of existence." *

Although the cervical vertebræ of the Pterodactyles were lengthened in form, their number falls short of that of birds. Not more than six or seven have been found in the extinct flying Saurians, whilst they are numerous in the plumed bipeds; the neck of the swan consists of no less than twenty-three. The thin slender lizardlike ribs of the Pterodactyle form a strong contrast to the flat and broad costal apparatus of birds; and in the pelvic bones of the extinct Saurian, the lacertian type is followed. The metatarsal bones of the foot are distinct in the Pterodactyle, but consolidated in the bird.

It is in the bones of the forefoot, however, that the modification of the reptile, for the medium in which it was sustained, is most striking. There is no difference in the number, and but little in proportion between the bones of a living lizard's forefoot, and those of a Pterodactyle's anterior or pectoral extremity; but the latter are so arranged as to fit them for expanding the membranous wing which was to enable that strange-looking dragon to steer its flight through the heavy atmosphere,

> Aloft, incumbent on the dusky air,

an operation which its low organization, and comparatively weak

* Bridgewater Treatise.

muscular irritability, would have rendered far more difficult in the rarer and purer fluid that now surrounds our earth. This wing differed much in the arrangement of its bones from that of the bat.

The eye of the Pterodactyle was very large, and the animal was probably noctivagous as well as diurnal.

Of these anomalous creatures no less than seven species have been described and named; nor is there reason for doubting that more remain to be discovered: an eighth undescribed species has been found at Stonesfield. Two of these are British, both brought to notice by Dr. Buckland; and the most perfect of these, the head of which, however, is wanting, is the *Pterodactylus macronyx*, Buckl., from Lyme Regis in Dorsetshire.

Dr. Buckland is of opinion that these Pterodactyles did not suspend themselves, when at rest, with their heads downward, like the bats; but he relies on the size and form of the thigh, leg, and foot, for the inference that they had the power of standing firmly on the ground, (where they possibly moved with folded wings, after the manner of birds,) and of perching on trees, and climbing on rocks and cliffs, by the joint aid of their anterior and posterior extremities, like bats and lizards.

With submission to an authority worthy of the greatest respect, we cannot subscribe to the whole of this inference. The smallness and weakness of the pelvis forbids us to agree with Dr. Buckland, when he infers that the Pterodactyle stood firmly on the ground, and probably moved thereon with folded wings, after the fashion of a bird. The hooks on the anterior extremities would not only have enabled this Saurian to suspend itself when it wished to rest, but to drag itself along prone on the earth, on which the structure of the pelvic organization forbad it to walk like a bird.

A careful examination of the whole osseous fabric conducts us to the conclusion that the Pterodactyle shuffled along upon the ground, after the manner of a bat, and scuttled through the water when it had occasion to swim; nor do we see why it might not, when at rest, have suspended itself by the hind-legs, like the volatile quadruped. The general hue of the body was probably lurid, and the texture of the skin shagreen-like, resembling in some degree the external tegument of a chameleon or guana, excepting the smooth membrane of the wing.

Insects, such as the large fossil dragon-flies (*Libellulæ*), disinterred with them from the Solenhofen quarries, and *Coleoptera*, whose elytra are found with the bones of the Stonesfield species in the oolitic slate there, contributed, doubtless, to their food,

but Dr. Buckland well observes that the head and teeth of some species are so much larger and stronger than would be required for insect capture, that the greater Pterodactyles may possibly have fed on fishes, darting upon them from the air, after the manner of Terns or Solan geese. The enormous size and strength of the head and teeth of *Pterodactylus crassirostris*, he adds, would not only have enabled it to catch fish, but also to kill and devour the few small marsupial animals which then existed upon land.

Such were the heteroclite animals to which nothing modern can in the slightest approach be comparable, except perhaps the pictorial dragons of a Chinese screen, and such in all probability were their habits when thousands of years ago they flitted heavily above

"The pois'nous fields with rank luxuriance crown'd,"

where the wholesome air now refreshes the well-cultivated land white to harvest, and the healthy civilized race of men, whose holy and happy day of rest is announced by the sabbath bell.

If the ploughshare, brightened by the fertile soil which it now divides, brings before us, when it turns up from the furrow some ancient Italian coin, the march of the Roman legions over our hills, plains, and valleys, what visions does the petrified bone of one of these Preadamite Saurians call forth!

Look at the reptilian relic in the stone which helps to form that cottage wall. As we gaze, the wall disappears; and, to the mind's eye, its place is occupied by a vast sea, which, when circulation animated that bone, covered its site. Through the waters of this sea, Ichthyosaurs, Plesiosaurs, Mosasaurs, and Cetiosaurs dart, swim, and gambol. If we turn landward, the sluggish river, the marshy jungle and the dreary plain seem peopled by ancient Crocodilians, Iguanodons and Megalosaurs, while Pterodactyles appear to hover in the murky atmosphere of the old dragon times.

Now, how changed the scene! Instead of animals of a low grade of organization, which then were the highest and predominant forms, the most elaborate and perfect of the animated works of the Creator abound.

Pterodactyles have been succeeded by birds—Ichthyosaurs, Plesiosaurs, Mosasaurs, and the like, by whales, dolphins, and great fishes. Where the herbivorous Iguanodon revelled, the ox, the deer, and the sheep, quietly crop the fragrant herbage; whilst in place of the destructive Megalosaur, the carnivorous mammalia keep down the excessive multiplication of the ruminants;

and MAN has the dominion over all. In future ages *his* remains will fill the bosom of the earth; and the traveller in some far distant century will feel the full force of Byron's lines wherever he sets his foot:—

> Stop!—for thy tread is on an Empire's dust!
> An Earthquake's spoil is sepulchred below!

THE END.

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